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1868

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"Among the honorable workers in the civilized world, to whom the public as well as the assured will die indebted, we give faithful and successful Life Assurance Agents a high place."

ELIZUR WRIGHT.

"That some of the tears of the widow may be wiped away, and some of the cries of the fatherless be hushed."







PREFATORY NOTE.

VERY science has its corresponding art. Life Assurance is a Science; but it is also an Art. The theory is one thing; the practice is quite another. And the latter is not a matter of less importance than the former.

As a consequence, active and intelligent Agents are essential to the prosperity of a Life Company. It is not enough to establish agencies. Those filling them are to be instructed

and stimulated into full-grown and efficient men.

Every successful and rising Assurance office has devoted a considerable part of its attention to the matter of agencies. Where this has been deemed of trifling moment, little has been accomplished.

A Life Agency may fairly be called a *Profession*. And hence an agent should have, besides a general education, a sort of *professional* education,—which, by common consent is demanded in the practice of law, medicine and the like. Other things being equal, the more familiar one is with his profession, the more thoroughly furnished is he for his work.

The public is fast becoming enlightened on the subject of Life Assurance. Inquisitive minds

now push their investigations beyond the advertisements, circulars, &c., of the Life Companies, and ask for other information. Hence, a higher grade of intelligence and capacity on the part of agents is requisite; - just as the general education of the masses necessitates a more thorough education of the teachers. They must broaden the horizon of their knowledge, and be prepared to speak intelligently of what they recommend. In a word, they must show that they are masters of their profession. For how can a novice instruct? And how can an agent bring to bear a controlling influence upon a man who is competent to be his teacher in the very things belonging to his occupation?

A work like that here submitted was therefore needed. Its aim is one and simple;—namely, to help Life Assurance Agents. It puts

into their hands just the facts they want to possess; gives them something to think about; furnishes a multitude of hints and suggestions; magnifies their work and places it on a higher level; raises their courage; kindles enthusiasm; and imparts force, readiness, and effectiveness in their high and beneficent calling.

The author takes occasion to acknowledge his indebtedness to the Hon. Wm. Barnes, Insurance Commissioner for the State of New York, Mr. B. F. Stevens, President of the New England Life Insurance Company, Boston, Mass., Mr. J. G. Batterson, President of the Travelers' Insurance Company, Hartford, Conn., Mr. Lewis C. Lawton, Assistant Actuary of the Mutual Life Insurance of New York, and other gentlemen, whose statistical and other publications, and whose kind assistance, have given increased value to this work.



CONTENTS.

	I.	GE_
THE S	SIGNIFICATION OF TERMS	
	-II.	
THE I	LITERATURE OF LIFE ASSURANCE	15
	III.	
THE I	HISTORY OF LIFE ASSURANCE	19
	IV.	
THE 1	NAMES, OFFICERS, ETC., OF EXISTING CO'S.	25
	V.	
THE S	SCIENCE OF LIFE ASSURANCE	31
	VI.	
THE I	PRACTICE ELUCIDATED	37

VII. PAGE. THE MORAL ASPECT OF LIFE OPERATIONS ... VIII THE QUALITIES OF A GOOD AGENT..... 47 He appreciates his work 47 He is moved by high impulses..... 49 2. His heart is enlisted 51 3. He is active and industrious 52 4. He is courageous and determined..... 54 5. He has tact and discrimination..... 56 6. He speaks the truth...... 58 7. 8. He is agreeable in manners 62 9. He is devoted to his calling..... 64 10. His interest is in one Company........... 65 11. He is careful in selecting risks.... 64 12. TX. BEGINNING THE BUSINESS...... 67 Personal canvass at the outset...... 67 1. A policy on his own life 68. 2. Familiarity with Life Assurance 69 3. Posted as to his own Company..... 70 4. His Medical Examiner 70 5.

	V11.
0	PAGE.
6.	Acquaintances registered and visited, 71
7.	Making new acquaintances 72
8.	Getting names for reference
9.	Treatment of other Agents 74
	X.
MANAG	ING THE BUSINESS75
1.	Method in everything 75
2.	Relations to the Home Office 76
3.	Satisfied with terms
4.	Prompt delivery of Policies
5.	Renewals and rejections
6.	Helping the Hesitating 79
7.	Filling out applications 79
8.	Resign if doing nothing 80
	XI.
ENLARG	ING THE BUSINESS 81
1.	Widening one's own field 81
2.	Striking for large Policies 82
3.	Depending on "Machinery."
4.	Editorial notices. 84
5.	The use of Reports, Office-books, &c 84
6.	The influence of Ministers 85

7.	Sunday-School Teachers 86
8.	Turning to advantage deaths of assured 86
9.	Same of the deaths of unassured · · · · · 87
10.	New attention to canvassing 87
11.	The motive of patronage
12.	Never without blank applications 88
13.	Recommending new Agents 89
14.	Operating through "bosses" and employees 89
15.	Visiting the "intimate friend," 90
16.	Convincing the Wives
17.	Looking after the newly married 91
18.	Making each assured a helper 92
19.	Applying to those already assured 92
	XII.
ARGUM	ENTS IN URGING ASSURANCE 93
1.	Scripture and duty 94
2.	Immediate provision 95
3.	It is found here 95
4.	The only method known
5.	Uncertainty of life 96
6.	Posibility of sickness 96
7.	Family affection
8.	A social obligation 97

			PAGE.
	9.	Its beneficence	98
	10.	A means of self-protection	98
	11.	Variety of uses	99
	12.	A good investment	100
ţ.	13.	Increases credit······	101
¥ .	14.	Personal Advantages	101
	15.	Joy to the Household	102
	16.	A dictate of prudence	102
	17.	Final appeal	103
		77777	
		XIII.	
H	OT WC	MEET OBJECTIONS	115
	1.	Indebtedness	105
	2.	Well off	106
	3.	Religious scruples	106
	4.	Fears as to safety	107
	5.	Expensiveness	108
	6.	Making money	108
	7.	Assuring one's self	109
	8.	The Savings Bank	109
	9.	Using funds in business	110
	10.	No family ties	
1	11.	Inability to continue	111
	12.	Some other time	111

XIV.

	PAGE
CONVE	NIENT TABLES113
1.	Interest and Discount
2.	Compound Interest No. 1
3.	Compound Interest No. 2 116
4.	Description of Standard Mortality Tables 120
5.	Breslau Table 124
6.	London Table 125
7.	Swedish Table 126
8.	French Table 127
9.	Northampton Table · · · · · 128
10.	Carlisle Table
11.	Equitable Table 130
12.	Belgian Table 131
13.	Combined Experience Table 132
14.	English Table No. 1
15.	English Table No. 2 · · · · · 134
16.	English Table No. 3 · · · · · · 135
17.	Height and Weight
18.	Short Rule of Expectation 137
19.	Discount Table 138
20.	Comparative Mortality Table, I 139
21.	Comparative Mortality Table, II 140
22.	Comparative Mortality Table, III 141
	XV.
ORIGIN	AND BUSINESS OF COMPANIES142



Agent's Manual.







THE SIGNIFICATION OF TERMS.

CTUARY.—In law, this word was originally used to designate a clerk, or registrar, in courts of civil jurisdiction. Webster defines an actuary as "the manager of a joint-stock company, particularly of an insurance company;—in America, chiefly ap-

pany." A better definition is, one engaged in what are termed contingent, or accidental calculations and estimates.

Annuity—Is an annual payment; or, a yearly income charged on the person or company granting it.

Assets—Constitute the entire property of all kinds belonging to a person or an association.

Assurance, or Insurance—Is a contract for the payment of a sum of money on occasion of a certain event, as loss, or death. In England, and, to an increasing extent, in America, assurance is used in life operations, and insurance in those of fire. The distinction, as made by Mr. Babbage, is this: Assurance is a contract dependent on the duration of life, which must either wholly happen or wholly fail. Insurance is a contract relating to any other uncertain event, which may partly happen or partly fail. Quite generally, however, the words interchange. Life Assurance may be defined to be a plan by which any sum of money may be secured at death, whenever that may take place, or be received at any given age of the life assured if the life continue.

Bonus—Is an extra dividend to the shareholders of a company, out of accumulated profits.

Dividend—Is the share of profits, or surplus, belonging to each partner or proprietor.

Loading—Is a sum added to a previous amount to make its sufficiency doubly sure.

Policy—Is a ticket, warrant, or written contract for money in a public fund or society.

Premium—Is the sum paid for insurance or indemnity. By

Single Premium is meant a sum of money paid down, and in consideration of which, without any further payment, the sum assured will be guaranteed to be paid at any given age, or at the death of the assurer. By Annual Premium is meant a sum of money to be paid yearly until the death of the party, or for a limited number of years, as may be agreed upon.

Reserve.—This is the difference between the present value of the sum assured and the present value of the net future premiums. It is that sum for which the Policy to which it belongs could be transferred to and reassured by another company.

Reversion—Is the sum payable at death, or at any future period. It may be secured by the payment of a single or of an annual premium.

Reversionary Addition.—That sum which is added to a Policy for the Cash Dividend at the single payment rate.

The amount so added is payable with the original policy.

Scrip—Is a certificate of stock, or of a share of joint property.

Void—Means empty, null, having no binding force. All Life Assurance Companies have certain conditions, restrictions, or rules, the violation of which hazards or destroys the policy. These restrictions relate to travel or residence in other countries; the payment of pre-

miums when due, &c. If these regulations are disregarded, or if the party assured dies by the hands of justice, or in an attempt to violate the law of any country where he may reside or happen to be, or in consequence of a duel, or by reason of intemperance from the use of intoxicating liquors, or by his own hand; or if the annual premium be not paid in the manner prescribed, the policy is in most of these cases, either in whole or in part, forfeited.





LITERATURE OF LIFE AS-SUBANCE.

OR the most part those who have written upon the subject of Life Assurance, have done so with the purpose either of developing its laws and foundation principles, or of exhibiting its calculations. Hence their writings are chiefly abstract and scientific. English authorship is the principal field of the Literature of Life Asssurance. America has yet to produce its first decidedly great work on this subject. The publications enumerated, present a pretty complete catalogue of all works of any importance on the Assurance of human life that

have ever been written.

Griffith Davies on Annuities.

F. Bailey on Annuities.

Richard Price on Annuities (2 vols.)

Quetelet on the Theory of Probabilities.

An Essay on Probabilities, by A. De Morgan.

Sang's Essay on Life Assurance.

Sang's Valuation of Life Contingencies.

Jones on Annuities and Reversionary Payments (2 vols.)

The Sixth and Twelfth Reports of the Registrar-General of England.

Pocock's Chronological List of Books on the Doctrine of Chances,

The Insurance Guide and Hand-book, 2d ed.; useful.

Charles Babbage's Tables of Logarithms.

Joshua Milne on Annuities.

E. Baylis on the Arithmetic of Annuities.

Robertson on Life Assurance.

William Morgan on Life Assurance.

Alfred Burt on Life Assurance.

Edward Hully on Life Assurance.

Hoyle on Life Assurance.

Park on Life Assurance.

Neison on Vital Statistics.

Ansell on Vital Statistics.

Ellison on Life Insurance.

Dowdeswell on Life Insurance.

Millar on Life Insurance.

E. J. Farren on Life Insurance.

A. Scratchley on Life Assurance Societies.

Thackeray on Life Assurance.

James (J. H.) on Life Assurance.

The Handbook of Life Assurance, by C. B. Norton.

The Vade Mecum, by J. Baxter Langley, M. R. S. C.

The American Manual of Life Assurance, by Henry C. Fish, D. D., Newark, N. J.

The American Life Assurance Magazine (Quarterly), by G. E. Currie, 153 Broadway (seven bound volumes).

The Insurance Monitor, by T. Jones, Jr., 14 & 16 Wall st., N. Y. (monthly, and back numbers).

The Wall Street Underwriter, by Grierson & Ecclesine, 18 Wall st. (Life and Fire), monthly.

Insurance Reports (New York and Mass.), bound volumes.

Journal of the Actuaries; monthly, London.

Francis Corbeaux on Laws of Vitality, &c.

Law of Fire and Life Insurance, Geo. D. B. Beaumont.

Assurance Premiums, by Wm. Orchard.

Life Assurance Manual, by P. A. Eagle.

Farr's New Life Tables. Quarto, 1864.

An Appeal for Life Insurance, by G. E. Currie, N. Y.

Annals, Anecdotes, etc., of Life Assurance, by J. Francis.

The Law of Life Assurance, by Charles John Bunyan.

Fifteen Years' Experience in a Mutual Life Insurance Company, by S. Homans, New York.

What is Life Assurance? by Jenkin Jones.

The Medical Selection of Lives, by Wm. Brinton.

Medical Estimate of Life, by S. H. Ward.

Hutton's Mathematical Tables.

George Cardwell: a Life Insurance Tale, by N. D. Morgan.

Marshall's Tables of Value of Annuities Hodgson's Observations on Duration of Life. Why Should I Insure my Life? by H. R. Sharman. Practical Life Tables, by Alex. McKean. Price's Observations on Reversionary Payments. Commission Profits of Life Assurance, by S. Brown. Treatise on Life Annuities, by F. Blayney. New and General Notation of Life Contingencies, by Hardy. Peter Gray's Tables of Life Contingencies. W. E. Hillman's Tables of Life Policies.

David Jones on Value of Annuities.

B. H. Todd's Life Insurance Investigation Tables.

W. T. Thompson's Actuarial Tables.

William Wood's Conversion Tables.

Popular Tables, by Charles M. Willich.

Medical Examinations for Life Insurance, by J. Adams Allen, Chicago, Ill.

Banking and Insurance Chronicle, Chicago, Ill. Chisholm's Commutation Tables (2 vols.)





THE HISTORY AND PRESENT POSI-TION OF LIFE ASSURANCE.

OUBT hangs over the actual origin of the idea and the practice of *insurance*. In the year 1435 a Spanish writer issued a challenge to the world, claiming for Barcelona the honor of being the birth-place of this practice. The claim was met by the Italians, who quoted the

rates of insurance on shipments from London to Pisa and Bruges as early as 1400. It was also ascertained by a chronicle of King

Ferdinand that the contract of reciprocal insurance was known in Portugal as early as 1375. Many other writers allude to the practice of in-

demnifying ship-owners and merchants against losses by the elements, or by enemies, at a much earlier date.

The invention of the principle of insurance has generally been accorded to the Romans, from the fact that the writings of Livy, Suetonius, Cicero, and Sallust mention stipulations of indemnity to contractors during the second Punic War, and a like surety granted by Claudius for delivery of grain during a time of great scarcity, as also the security claimed by Cicero for the carriage and safe delivery of the spoils of war gained by the victories in Silesia. The first English statute appears in the time of Ellzabeth, 1601, but it designates the system as of "tyme out of mynde, and a usage amongste merchants." The question of priority must therefore be accorded to marine insurance, and the invention to the Italians.

LIFE Assurance, also, dates far back in the annals of the past. It is common for writers on this subject to assign its origin to the beginning of the eighteenth century; making its existence hitherto to have been about one hundred and fifty years. But it has certainly existed twice that length of time. Indeed, we find traces of the theory of probabilities, (which underlies life assurance,) as far back as the time of Pliny, and even Plato, preceding the Christian era. It is also certain that some four hundred years after Christ, a table was actually in existence by which annuities could be valued.

But that Life Assurance was absolutely practiced as early

as above stated, i. e. in the sixteenth century, is put beyond question by the contents of a volume in the French language called the Guidon (guide, standard), whose author is unknown, but which must have been written some three hundred years since. In this ancient document the writer speaks of "insurance made by some nations upon the life of men, in case of their decease upon a voyage, to pay certain sums to their heirs or creditors." Hence it appears that in his day "some nations" practiced life assurance. How much earlier we do not know.

From an old English work on *Usury*, printed in 1584, we learn that a particular feature of life assurance—endowments for children—supposed to be a very modern idea, was known and substantially practiced then (nearly three hundred years ago). The writer speaks of money being invested in a "Companie," which company agrees "that whosoever lendeth such a summe of money, and hath a childe of one yeere, shall have for his childe, if the same childe doo live till he be full fifteene years of age, 500 li. (pounds) of money."

We also find historical traces of the practice of assuring lives in Germany, of an equally early date.

The first scheme of importance, however, and which may be regarded as the foundation of the modern system of life contingencies, was the system of Tontines, invented by Lorenzo Tontie, or Tontine, a Neapolitan, in 1653.

The first public office for assuring lives which we are able to identify, originated with a clergyman of Middletown, Lancashire, England, named William Assheton, D. D., in the year 1698. His object was the benefit of the widows of clergymen and others, and for settling jointures and annuities. It went into operation under the name of "The Mercer's Company," in London. In 1700 another society was instituted called the "Society of Insurance of Widows and Orphans."

In the year 1706, the "Amicable Society of London" was founded; but it made this fundamental error, that the rates of premium were uniform for all ages assured; nor was any fixed amount guaranteed in case of death. Hence very little was done. In 1721 the "Royal Exehange," and "London Assurance" Companies were formed. But it was not until 1780 that the business of Life Assurance may be said to have fairly begun. In that year the "Equitable Society" (which eighteen years before had obtained a charter with the greatest difficulty, and had so far met with little success, so great was the ignorance prevailing upon the whole subject) adopted the Northampton tables as the basis of its calculations; its actuary or manager being William Morgan, who was aided by the advice of his uncle, Dr-

Richard Price, a celebrated writer upon the principles of Life assurance.

Life Assurance was introduced into this country by a few Episcopalian clergymen who formed a society in 1769. The first *public* Assurance Company was the Pennsylvania, established in 1812.

The Massachusetts Hospital Life Insurance Company seems to have been the next formed, in the year 1818. In 1820 the Ætna Insurance Company of Hartford had Legislative power granted to it to do Life business. The New York Life Insurance and Trust Company was chartered in 1830, the Mutual of New York in 1843, and the New England Mutual in 1844. About this time several companies went into successful operation.

At the present time there are in Great Britain nearly two hundred such companies; and the amount there assured upon life is estimated at £300,000,000. Some £30,000,000, new assurance is being added annually. One tenth of the male adult population is assured.

In the United States there are about seventy Life Companies, receiving an annual income of nearly \$50,000,000. But little short of four hundred thousand lives are now assured, covering risks amounting to about \$1,000,000,000. These are striking proofs of the popularity of Life Assur-

ance. During each year, more than six millions of dollars are paid by the Life Companies in the United States to the families or representatives of the assured; mainly to widows and orphans.

The number of policies now issued, yearly, by all the Companies in the United States, is not far from 120,000. And the business is constantly and rapidly increasing.

A few words may be added on the stability of Life Assurance. It is too much to say that Life Companies have never failed. In England, up to the time of Richard Price (1780), assurance of life had been little better than a gambling operation. And much later, has there been great unfairness in business of this description; which, happily, is not true at present. A very few Companies doing life business in this country, have by mismanagement gone down; but the cause has been the union of other business with that of life. Not a single Company confining itself to its legitimate work has failed, nor is the thing conceivable, for there is scarcely room for contingencies. The experience of the commercial world can point to no such permanency as is seen in Life Companies, nor does any class of institutions compare with them for uniformity, safety, and reliability.



LIFE ASSURANCE COMPANIES.

E have spared no pains to be able to present here a full and complete list of the several Life offices in the United States. Such a list, it is believed, is found in no other publication. For reference, and correspondence, it will be of great convenience, besides the satisfaction that one feels in being "posted." We arrange them in alphabetical order.

Of the officers, it will be understood that the one first named is *President*, and the next, Secretary. The date is the year of organization.

ÆTNA Hartford, Conn., 1820. E. A. Bulkeley, T. O. Enders.
AMERICAN Philadelphia, Pa., 1850. Alexander Whilldin, John S. Wilson.
AMERICAN MUTUAL New Haven, Conn., 1848. Benjamin Noyes, R. F. Lyon.
AMERICAN POPULAR New York city, 1866. Benjamin F. Bancroft, Fred. Shonnard.
Arlington Mutual Richmond, Va., 1867. John E. Edwards, D. J. Hartsook.
Ashbury Life New York, 1868.
ATLANTIC MUTUAL Albany, N. Y., 1866. Robert H. Pruyn, Louis B. Smith.
Atlas St. Louis, Mo., 1866. Charles A. Mantz, J. R. Macbeth.
AMERICAN TONTINE AND SAVINGS New York city, 1867. William H. Ludlow, Pres.
Berkshire Pittsfield, Mass., 1851. Thomas F. Plunkett, Benjamin Chickering.
Brooklyn, N. Y., 1864. Christian W. Bouck, William M. Cole.
Chicago, Ili., 1867. W. F. Tucker, John W. Clapp.
CAROLINA Memphis, Tenn., 1867. M. J. Wicks, W. F. Boyle.
CHARTER OAK
CINCINNATI MUTUAL Cincinnati, O., 1866. Conduce G. Megrue, J. F. Reynolds.
Connecticut General Hartford, Conn., 1865. Edward W. Parsons, Thomas W. Russell.

CONNECTICUT MUTUAL Hartford, Conn., 1846. Guy R. Phelps, W. S. Olmsted.
CONTINENTAL Hartford, Conn., 1862. John S. Rice, Samuel E. Elmore.
CONTINENTAL New York city, 1866. Justus Lawrence, J. P. Rogers.
COVENANT MUTUAL St. Louis, Mo., 1853. A. F. Shapleigh, Charles C. Archer.
DIAMOND STATE MUTUAL Wilmington, Del., 1867. James C. Aikin, Robert McCabe.
DELAWARE MUTUAL Wilmington, Del., 1867. J. P. McLear, M. M. Child.
ECONOMICAL MUTUAL Providence, R. I., 1866. Simon S. Bucklin, William Y. Potter.
EMPIRE MUTUAL Chicago, Ill., 1867. Thomas Drummond, Edwards W. Porter.
ENTERPRIZE
EQUITABLE ASSURANCE SOCIETY. New York city, 1859. William C. Alexander, James W. Alexander.
EQUITABLE LIFE Des Moines, Iowa, 1867. P. M. Casady, F. M. Hubbell.
Excelsion New York city, 1867. Samuel T. Howard, Sidney Ward.
Eagle and Albion British, 1807. Sir James Buller East, Jeremiah Leycraft, Agt., N. Y.
EUROPEAN Association British, 1820. Frederick Smith, George M. Knevitt, Agt., N. Y.
FRANKLIN Indianopolis, Ind., 1867. James M. Ray, Edward P. Howe.
Fraternal MutualNew York.

GENERAL L. & Accott. Mut'l Ins. Co. Newark, N. J., 1867. Isaac Pomeroy, John G. Drew.
GERMAN MUTUAL Cincinnati, O., 1862. H. Hemmelgarn, H. A. Ratterman.
GERMAN MUTUAL St. Louis, Mo., 1857. Charles W. Horn, Arthur Olshausen.
GERMANIA
GIRARD Philadelphia, Pa., 1836. Thomas Ridgway, Pres.
GLOBE MUTUAL New York city, 1864. Pliny Freeman, Henry C. Freeman.
Great Western New York city, 1865. Robert Bage, E. Dwight Kendall.
GUARDIAN MUTUAL New York city, 1859. Walton H. Peckham, Henry V. Gahagan.
HAHNEMANN
HARTFORD LIFE & ACCIDENT Hartford, Conn., 1865. Thomas J. Vail, James P. Taylor.
Hoме New York and Brooklyn, 1860 Walter S. Griffith, George C. Ripley
Home Mutual Cincinnati, O., 1867. Orren E. Moore, Charles H. Frost.
HAND-IN-HAND MUTUAL Philadelphia, Pa., 1867. Nicholas Rittenhouse, James G. Dixon.
Homeopathic New York city.
HOPE Covington, Ky., 1865. George W. Holmes, John Crofton.
International British, 1837. Edmund S. Symes, John G. Holbrooke, Agt.

JOHN HANCOCK MUTUAL Boston, Mass., 1862.
George P. Sanger, George B. Ager.
KENTUCKY MUTUAL Covington, Ky., 1866. J. C. Beck, A. C. Dunlap.
KNICKERBOCKER New York city. 1853. Erastus Lyman, George F. Sniffen.
LIVERPOOL, LONDON, & GLOBE. British, 1836. J. A. Tobin, Alfred Pell, Agent, N. Y.
Missouri Mutual St. Louis, Mo., 1867. Theron Barnum, George H. Bender.
MARYLAND Baltimore, Md., 1866. George P. Thomas, A. K. Foard.
Manhattan New York city, 1850. Henry Stokes, J. L. Halsey.
Massachusetts Hospital Boston, Mass., 1818. George W. Lyman, Moses L. Hale.
Massachusetts Mutual Springfield, Mass., 1851. Caleb Rice, F. B. Bacon.
Mississippi Valley Covington, Ky., 1866. J. W. Finnell, A. H. Ransom.
MUTUAL New York city, 1842. Frederick S. Winston, Isaac Abbatt & J. M. Stuart.
MUTUAL BENEFIT Newark, N. J., 1845. Lewis C. Grover, Edward A. Strong.
Mutual Chicago, Ill, 1865. Merril Ladd, Charles B. Holmes.
Michigan Mutual Detroit, Mich, 1867. John J. Bagley, John T. Liggett,
National Capital Washington, D. C., 1867. Joseph F. Brown, G. Alfred Hall.
Nashville, Tenn., 1867. John M. Bass, J. W. Hoyte.

NATIONAL LIFE INSURANCE Co. . Philadelphia, 1868. C. H. Clark, E. W. Peat. NATIONAL OF VERMONT Montpelier, Vt., 1850. J. Y. Dewey, George W. Reed. New York city, 1863. Edward A. Jonas, John A. Mortimore. NATIONAL TRAVELERS', LIFE DEPT. New York city, 1867. James R. Dow, J. H. Taylor. NEW ENGLAND MUTUAL Boston, Mass., 1835. Benjamin F. Stevens, Joseph M. Gibbens. New Jersey Mutual..... Newark, N. J., 1865. Joseph P. Bradley, William M. Simpson. New York..... New York city, 1841. Morris Franklin, William H. Beers. New York State..... Syracuse, N. Y., 1866. John J. Peck, George J. Gardner. NORTH AMERICA New York city, 1862. N. D. Morgan, J. W. Merrill. North American Life & Ac'DT, Philadelphia, Pa., 1864. Lewis L. Houpt, S. P. Darlington. North Western Mutual.... Milwaukee, Wis., 1850 S. S. Daggett, A. W. Kellogg. New York L. & Trust New York city, 1830. David Thompson, Philip R. Kearney. PROVIDENT FUND & LIFE New York city, 1867. John Slosson, J. E. Conant. PENN MUTUAL LIFE Philadelphia, Pa., 1847. James Traquair, H. S. Stephens. PENNSYLVANIA Co. FOR INS. ON LIVES, &c. Phila., Pa., 1812. Charles Dutilh, Pres. PHŒNIX MUTUAL..... Hartford, Conn., 1851. Edson Fessenden, James F. Burns.

PROVIDENT L. & Trust Co Philadelphia, Pa., 1865. Samuel R. Shipley, Pres.
PROVIDENT L. & INVESTMENT Chicago, Ill., 1865. Ira Y. Munn, C. Holland.
PIEDMONT REAL ESTATE LIFE INS. Co., Montreal, Va., 1867. William C. Carrington, J. J. Hopkins.
ROYAL British, 1845. Charles Turner, A. B. McDonald, Agt., N. Y.
San Francisco, Cal.
SECURITY New York city, 1862. Robert L. Case, Isaac H. Allen.
Southern Memphis, Tenn., 1866. G. W. McCarn, Benjamin May.
Southern Mutual Columbia, S. C., 1850. W. F. DeSaussure, F. W. McMaster.
Southern Life & Trust Mobile, Ala., 1866. Robert S. Bunker, S. C. Donaldson.
Southern Mutual Louisville, Ky. J. Lawrence Smith, L. T. Thustin.
St. Louis Mutual St. Louis, Mo., 1858. D. A. January, William T. Selby.
STATE MUTUAL Worcester, Mass., 1846. Isaac Davis, Clarendon Harris.
Standard
TRAVELERS' INS. Co., LIFE DEP'T, Hartford, Conn., 1866. James G. Batterson, Rodney Dennis.
Union Central Cincinnati, O., 1867. John Cochnower, N. W. Harris.

UNITED STATES New York city, 1850. John Eadie, Nicholas De Groot.
Universal
United States Mutual LaFayette, Ind., 1867. R. H. Milroy, George Williams.
Washington New York city, 1860. Cyrus Curtiss, William A. Brewer, Jr.
Western Cincinnati, O., 1866. William Resor, O. W. Ballard.
Widows & Orphans Benefit New York city, 1864. Charles H. Raymond, Henry B. Robinson.
WORLD MUTUAL New York city, 1866. George L. Willard, Charles W. Plyer.



THE SCIENCE OF LIFE ASSURANCE.

OME grand foundation principle lies at the base of every science. This we know to be true of theology, medicine, jurisprudence, political economy and the like.

Now, what is the fundamental principle of Life Assurance, as a Science?

It is this:—the Law of Average.

We will make this plain.

By the word law (as law of nature, law of gravitation, and the like) is meant, the regular method by which certain effects follow certain conditions, or causes. When we have ascertained how, or in what manner, or in what relative pro-

portion, certain effects follow certain causes, then we say we have found out the *law* regulating such and such things: as when observing men determined the *laws* regulating electricity, the tides, steam, trade, falling bodies, and the like.

Now, is there a law regulating the rate of mortality, or the falling of human lives in the aggregate? We should suppose so, beforehand, since nothing seems left to chance. Every thing appears to be governed, controlled, regulated: only sometimes the law, or rule, respecting the occurrence is too hidden to be detected. It is generally agreed that what we call chance is merely direction not understood.

"All nature is but art unknown to thee,
All chance direction which thou canst not see."

Just how many and what kinds of accidents (as they are called) and crimes, even, will occur among a given population during a year, for instance, can be determined with certainty beforehand. Just how many letters will be mailed undirected (from haste or carelessness in correspondents) out of any large number of letters, can be known beforehand, on the ground that what has occurred will recur. Again, it is demonstrated that just such a relative number of white and black balls, in a given number of drawings, will be taken from an urn where they are mixed promiscuously. This has been found out by actual experiment.

Or, throw into the air some thousand times a number of pernies, say fifteen hundred. It can be reckoned beforehand just how many "heads" and how many "tails," in the whole number of throwings, will be up or down. Nothing would be more uncertain than whether it wou'd be "head" or "tail" in one throwing of one penny; but the average in many throwings of many pennies can be got at exactly.

We should expect, then, that there would be a law regulating the falling of human lives, so that we could average them, or get the proportion of them;—so many out of such a number falling in a given time.

And this we find to be the case. The duration of any one life cannot, of course, be known; but that of a multitude of lives is easily ascertained. Or, to change the expression, nothing is more uncertain than the duration of individual life: nothing is more certain than the average continuance of life. In the same age and same country the rate of mortality from pestilence, war, &c., &c., may vary; but even these variations are doubtless governed by fixed laws; and looking at all periods and all countries, the variation does not exist.

The facts proving these statements have been brought to light by the study of statistics. For upwards of 200 years, tables have been kept in different parts of the world, to a greater or less extent, showing the births and deaths of individuals. These are generally called tables of mortality; and upon these the duration of life has been calculated with almost unerring accuracy.

By these it is ascertained, for instance, that if we take 10,000 persons in the prime of life, 1,200 will die the first ten years; 1,500 the next ten; 1,700 the next ten; and so on till all have passed away. 10,000 persons at the age of 25 years will attain the age of 62 years on an average; at the age of 35, 65 years; at the age of 45, 68; at the age of 55, 71. The average age at death of all born, is about 33 years. Or we may say that any 1,000 persons in ordinary health at the age of 25 will yet live to average about $37\frac{1}{2}$ years each; at the age of 30, about $34\frac{1}{2}$; and at the age of 35, just 31 years each; and so on.

Now, calculations having reference to money values may clearly be made upon any circumstances sure to recur. Having, then, before us, the probability of death in each year of age, we have only to charge each individual that sum which is the aggregate of the present values of the cost of insurance for each successive year of life, and we have what may be termed the cost of assurance. If one lives longer than those assured with him, he helps those who die early: if he dies early, they help him. In this way a perfect average is secured, which, being based on accurate and sufficient lifetables, is just as reliable as the equilibrium of the planets.

The deficient payments of those who die early are compensated for by the additional payments of those who live longer. Of course, to the actual cost of assurance, there must be added office and other expenses, use of capital, a surplusage for security, etc., and all these put together make up what are called the rates of assurance, rendering it safe to issue policies at these charges, whether for the whole term of life, or for a certain period, on the endowment plan.

The following, from the pen of an unknown writer, is a pretty lucid statement of the theory and practice of Life Assurance:

All Insurance is but the taking upon many the risk of one, so that if he loses what he insures they collectively shall make it good to him. If they be a thousand, his loss divided among so many hurts nobody; while if it had fallen upon one only it would have ruined him. Say, for example, that one thousand persons, at the age of thirty, assure each other for life to the amount of \$1,000 each, and that each pays for this protection a yearly premium of \$23.60. The collective premium will make \$23,600. The casualties the first year will be probably eight, so that instead of the society having to pay back the whole \$23,600 which they have received, they would have to pay back but \$8,000. This

will leave, with accrued interest at four per cent., \$16,544 on their hands to meet subsequent losses, and this fund with future premiums, as fast as received, will be put out at interest. The next year sees the business renewed in favor of nine hundred and ninety-two survivors, of whom a like number will die during the second year, say eight persons. To the heirs of each of these again is paid \$1,000, collectively \$8,000. The third year sees nine hundred and eighty-four survivors whose premiums bring in \$23,222. Once more, an increased number of these, or nine, die during the third year, and \$9,000 is paid to their representatives. The fourth and each following year proceed in like manner until about the sixty-fifth year they will in nearly every case all have died, and a thousand times \$1,000 will have been paid them; that is \$1,000,000.

To the INDIVIDUAL, then, Life Assurance holds out PROTECTION; and to the CAPITALIST, the profit of taking those chances of life and death which the individual must not run, and can fairly pay to have lifted from his shoulders; as is the case when one takes advantage of fire or marine insurance.





THE PRACTICE ELUCIDATED.

EDUCING to practice the theory as explained in the foregoing chapter, there are a few points that may require further elucidation.

The working plans of companies differ. While all are based upon the same fundamental principles, they are organized upon different systems, and vary in the conditions adopted, and in the detail and application of benefits. Thus, there are joint-stock companies, strictly so called, in which a capital is furnished as security to the assured, by individuals who receive all the profit or surplus premiums of the business, as a remuneration for the risk and

company and part mutual, having also a joint-stock guarantee capital, but allowing a portion of the profits, or all the profits, to policy-holders, after deducting legal interest upon the guarantee capital. And the purely mutual companies, in which all the surplus, or profits of the business, belongs to the policy-holders in proportion to the premium they pay. There are also companies in which the payments of policy-holders are wholly in cash, and others where partial payment is made in notes.

The matter of profits, dividends, &c., may also require some explanation. If there was but one invariable rate of mortality from which we could determine the exact number of assured persons who would die at each age; if the rate of interest never fluctuated, and it could be precisely determined per policy what the expenses of management would be, the rate of premium deduced therefrom would be, as we have previously stated, the exact value of the sum assured. But as it is impossible to obtain an absolutely accurate rate of mortality, and also to prevent the admission of some bad lives, and as the interest of money is constantly varying, it is absolutely necessary, for the security of the assured, to be certain that the premiums charged are sufficiently high to cover the risks incurred. Hence, the rates are expected to be somewhat higher than will eventually

prove to have been necessary. Here is an income or source of profit.

To this must be added several other sources of revenue. In calculating interest the rates are assumed at 3 per cent. in Fingland, and in this country at 4 per cent.; while a company, in fact, receives 6 or 7 per cent., often more. This is done by judicious investments, or loaning on good These investments, of course, are drawing interest, which interest is again reloaned, making an investment at compound interest. These interests are an accumulation to the benefit of the company; which, in a few years, in a successful one, whose expenses are proportionate to their business, amounts to a large sum. Again, in order to cover expenses and still further to provide against all contingencies, the companies universally add to the rates obtained by calculation from correct tables of mortality, a loading of from 20 to 40 per cent. This is usually found more than is necessary, and forms another source of profit. Moreover, the lives which are assured are much better than the average of lives upon which the tables of mortality are based, the average expectancy being increased by the judicious selections made by the office; this consequently results in a profit. A profit is also acquired by the lapse, or loss, of policies from non-payment, and by the purchase of policies,

as the company always reserve a sufficient amount to indeminfy them for the risk already incurred.

In these several ways, and others incidental to the business, it happens that all companies managed with prudence, accumulate a larger amount of funds than is necessary to provide for future losses.

The adequacy of the premiums charged is tested by a "valuation" of the income and liabilities of the Society, which the offices make at certain periods, and if it results that they have a surplus after putting by sufficient to meet every probable claim upon them, they then distribute their profits. All profits in purely stock companies are divided among the stockholders; while in mutual and mixed companies they are distributed among the life members in an equitable proportion. In the distribution of surplus funds periods of three or five years have usually been preferred to shorter ones; because the rate of mortality is generally supposed to be more uniform among a large number of persons, and extending over a long period. Some companies in England, for this reason, make their dividends only once in seven or ten years. In many companies, however, both in England and America, the dividends are declared annually. The funds returned to the assured are generally disposed of as each may prefer; either to reduce the annual

foremium, or to the purchase of additional assurance without farther charge for premium (adding the dividend to the policy), or to abate the amount of future premiums, the sum assured remaining the same.

A few words may be in place as to the *lapse* or *surrender of policies*. It is sometimes complained by those wishing from any cause to withdraw from a company, that they do not get the full value of their policies.

Professor De Morgan observes on this, "Among the sources from which the offices draw profit, are lapsed policies. But what they receive by the lapse of the policy is not all profit; but only that portion by which the premium for the whole life exceeds the premium for a temporary assurance. Every premium which is paid by an assurer contains the consideration given for the chance of his dying in each and every subsequent year. If, then, he remain a member of the office and stand the risk of death during a certain number of years, all such part of his premiums as was consumed for the risk of those years become due to the office and was taken by the office as compensation for the risks, and cannot, therefore, be said to fall to them as profit upon the lapse of the policy. Two individuals, A and B, go to the office on the same day, and assure their lives for the same sum, A upon his whole life, and B

for seven years. A pays, say £10 of premium, and B £7. At the end of seven years A allows his policy to lapse just at the time when B's policy expires by its own construction. What does the office gain by the lapse? Evidently, the temporary annuity of £3 by which the two premiums differ. The £7 paid by A out of £10 is not more than sufficient to pay his share of the claims which arose during the years which he continued in the office; the remaining £3 was a reserve for future years, which becomes profit to the office on his declining to stand the risks of these years."

This would seem to be sufficiently plain. The principle of assurance is, that the claims of those who die early are paid by the contributions of those who live long; therefore, if the *whole* of the premiums were returned to parties surrendering their policies, it might become impossible for an office to fulfill its engagements.





THE MORAL ASPECT OF LIFE OPERATIONS.

O view could be more incorrect than that LIFE transactions are simply like other insurance transactions. They are of a far higher and more sacred character. They differ in these important respects.

Other kinds of insurance, for instance, pertain to property merely. A fire or marine insurance company deals simply with material objects—assumes risks upon houses, ships, merchandise. And then, again, its transactions are with one party. They begin and terminate with the insured.

Not so with a Life Company. Here the operations touch human existence. They relate to its fall or continuance. That for which one will "give all that he hath" is the matter bargained about. A man may speculate in property, but how abhorrent the idea of speculating in human life! A man may barter and banter where mere goods are concerned; but what a degradation to bring life operations down to this low level! A man may think lightly and speak flippantly of the destruction of barns and merchandise; but of the end of earthly existence he is expected to entertain a degree of seriousness.

Then, too, the Life office has to do with other parties than the assured. It is virtually acting for widows and orphans. It assumes to be their almoner and protector. A husband and father entrusts to it what is expected to mature only at his death. If there be fraud or unfairness, it is at once against the dead and the living. The wrong takes place when the party originally dealt with cannot set up a defense for the innocents; since he is no more one among them. And those for whom he toiled, and planned, and sacrificed, are now deprived at once of their just rights, and of the fruits of his efforts. Their sustenance is taken from before their mouths. The table is bare, where love, in anticipation, spread a bounteous repast. The guardians of the now defenseless ones have become their despoilers. How

rould there be a grosser wrong—a more aggravated wickedness?

Viewed in this light, how high the obligations which a Life office assumes! How sacred its trusts! And, consequently, how honorable and how elevated should be its aims and operations!

Now, an agent is expected to be the exponent of this moral dignity which ought to invest transactions in life. He is the representative of these transactions. Men form their ideas, not only of his particular Company, but of Life Assurance itself, from him. Any act of an Agent which is not honorable, has a direct tendency to dishonor himself and all his fellow-laborers. And not only this, it brings odium upon the whole institution. It poisons the system of Life Assurance, and works so much towards its ruin.

For these reasons, a Life Agent ought to be the very highest style of a man. What a fire, or marine, or banking or other agent may be, is nothing to him. He is to be much more than is expected of others. There is to be in him more of conscience; more of genuine goodness; more of the powers of honest persuasion; more of the capacity to appreciate and to use those motives which appeal to the higher and finer sensibilities.

And we earnestly maintain that Life Assurance will never realize its best capabilities, until it is practically elevated to the high moral position here assigned to it. In the following chapter, the aim has been to analyze and set in order, and to inculcate the principal elements which constitute a permanently effective agency.





THE QUALITIES OF A GOOD AGENT.

1 HE APPRECIATES HIS WORK.

NE can generally form a pretty accurate opinion of a Life Company by an acquaintance with its agents. The good agent understands and appreciates this fact, and also that men will judge of the whole system of Life Assurance by him.

Accepting an appointment, therefore, he feels his responsibility. He has high ideas of his work. He looks upon it as benefiting the party assured, by giving to him quiet of mind; by inducing habits of economy, sobriety, and forethought; by setting before him an honorable

motive to action and enterprise, and by leading him to the discharge of a sacred duty.

He considers that his efforts are helping to rid the community of poverty and its frequent attendants—vice and crime. And also that he is strengthening the sinews of social life by every policy he obtains. And what is more, that he is befriending the poor and needy; wiping sorrow from eyes dimmed with tears, and deserving the tribute of gratitude awarded to one of old: "When the ear heard me then it blessed me, and when the eye saw me it gave witness to me; because I delivered the poor that cried, and the fatherless, and him that had none to help him. The blessing of him that was ready to perish came upon me, and I caused the widow's heart to sing for joy."

An eminent minister once said: "Were I to leave the ministry, I should take an agency for Life Assurance; for I consider that it, next to direct religious efforts, is doing most to benefit society." And a very high authority—the Hon. Elizur Wright, late Insurance Commissioner of Massachusetts—says: "Among the honorable workers in the civilized world, to whom the public as well as the assured will die indebted, we give faithful and successful Life Assurance Agents a high place; and no field that we know of is more inviting to an ambition that would devote the

best of talent to the benefit of society at large, and individuals in particular."

To have such a conception of the value and dignity of an agent's vocation, is an important point gained. In such a case, where the motives of worldly policy are pleasantly mingled with higher moral considerations, and all these blend together in the beautiful philosophy which constitutes the chief charm of Life Assurance, the business of an agency will be both agreeable and successful. But without this appreciation of his work, how can an agent expect to succeed? How can he have faith in it, and impart to others confidence and interest in it? If he does not appreciate its benefits, how can he forcibly place them before others?

As a first thing, then, let an agent endeavor to rise up to a just estimate of the value and the moral grandeur of his undertaking. (See also, on this, page 43, etc.)

2. He is Moved by High Impulses.

WRITER observes that some agents walk about like apprentices to an undertaker, proclaiming in sepulchral tones the uncertainty of life, &c., and they never succeed; while some of the jolliest fellows in existence are very successful agents, because they carry sound

and well-balanced minds, with a love of their fellow man, and can appreciate and feel the motives that will sway those with whom they come in contact.

We have seen men acting as agents, who seemed to feel that they were doing a mean sort of work, and needed to beg pardon of all creation for being about such work—for being alive, we had almost said,—whereas, they may well hold up their heads, and go out to their task animated by the very highest motives of philanthropy and moral obligation.

One should look upon his business in the light already presented, as a great public benefit, and feel that it does not detract from his being a promoter of the general good of mankind because he gets a living by his labor. He who does the state a service while at the same time earning an honest livelihood, is deserving of double honor, first because he promotes the public weal, and next because he secures his dependents against want.

Let a Life Agent, then, feel self-assured and confident. He need not depreciate his calling, as compared with any other business or profession whatever. Merchants, law-yers, physicians, school-teachers, secretaries and agents of benevolent societies even, are often doing less to scatter benefits throughout the human family, than are honest and efficient Life Agents. Far be it from them to feel that they

are palming off something that is not worth what is paid as an equivalent, and infinitely more too. If not now, some time, blessings will be pronounced upon them.

3. His HEART IS ENLISTED.

F a celebrated living actress, whose powers are worthy of a better cause, it has been written—

"We listening weep; but every burning drop Flows from thy heart, ere falling from our eyes."

To make others feel, we must first ourselves feel. Deep conviction is contagious. It wins its way. It speaks in the eye, the looks, the tone. Other things being equal, a man's force in impressing others is in the ratio of his own heart-force. Says Goethe:

"Persuasion, friend, comes not by toil or art;
Hard study never made the matter clearer;
"Tis the live fountain in the speaker's heart
Sends forth the streams that melt the ravished hearer.
Would you, then, touch the heart, the only method known
My worthy friend, is first to have one of your own."

All this applies well to a Life agent. If he loves his work; if he puts his heart under it, look out for results! To do much, he must be full of it. A Secretary once

wrote to a newly-appointed agent: "Your very boots must creak the name of your Company!" It reminded us of the advice of Dr. J. W. Alexander to a ministering brother, as to having his heart enlisted in sermonizing: "Live for your sermon. Live in your sermon. Get some starling to cry—
"Sermon! sermon!"

No class of men ever propagated a great interest, and carried it through to victory, who did not first *wed* it, and wholly cast in their lot with it for better or for worse.

All effective agents have "Life Assurance on the brain." They spring to their task with an elastic and buoyant spirit. Write it down as a rule, that no man ever does much who is not enthusiastic in his profession or business—who does not think his enterprise, whatever it be, the greates', or at least one of the greatest, and most important in the world. Only then are his energies untiring. Only then does the fire in his own soul kindle upon the souls of others.

4. He is Active and Industrious.

HEN a lady once asked Turner, the celebrated English painter, what his secret was, he replied: "I have no secret, madam, but hard work." This is a secret that many have never learned, and from this cause

they don't succeed. Labor is the genius that changes the world from ugliness to beauty, and the greatest curse to one of the greatest blessing.

It is eminently true in Life Assurance, that "the hand of the diligent maketh rich:" while "idleness clotheth a man in rags."

There is no way of getting on well in a Life agency, short of absolutely hard work, and the devotion of time to it. The agent must be a man not only to 'strike the iron while it is hot,' but as Cromwell said, 'to make the iron hot by striking.' "Peu et peu,"—little by little—is a motto to be hung up in the agents' office. Or this: "Only work wins,"

Luther was once asked how he found time to translate the Bible. His reply was, "I did a little every day." And Beethoven, when fifty-two years of age, wrote to his friend Wegeler, "My maxim has always been nulla dies sine linea—(no day without a line), and if I allow my muse to slumber, it is only that she may awake with fresh vigor."

A Life agent accepting such sentiments is on the road to success.

5. He is Courageous and Deter-

NE should not accept a Life-agency until he has made up his mind to succeed. It has its difficulties and discouragements. But you must remember that a man can hardly be expected to jump into any splendid business at once. Very few agents are as successful as they could desire at the outset. One of the most efficient agents in the country worked diligently for six weeks before he took his first risk; but he said, "I am bound to succeed." During the next three months his commissions were over twelve hundred dollars.

"The wise and active conquer difficulties By daring to attempt them; sloth and folly Shiver and sink at sights of toil and hazard, And make the impossibility they fear."

The old Crusaders used to say, "Faint heart never won fair lady." Another adage in everybody's mouth declares that "Fortune favors the brave."

That famous educator, Miss Mary Lyon, of South Hadley, Mass., used to say to her pupils, "If you commence teaching and do not succeed, teach till you do succeed."

If the agent gets sorely disappointed in cases where he

was confident, let him nevertheless remember the lines in the Loves of the Angels:

"Hope's precious pearl in sorrow's cup Unmelted at the bottom lay, To shine again when, all drunk up, The bitterness should pass away."

A newly-appointed agent once said, when finding it hard to get a start, and to make both ends meet in living, "I will share a dry cracker with my wife sooner than give it up!" We scarcely need add that he had a per manent success.

Here one may well write over his office-door General Grant's famous dispatch, "I will fight it on this line," etc. or the couplet of Sir Walter Scott:

"Come one, come all—this rock shall fly From its firm base as soon as I."

Never, in a solitary case, have we known an agent to complain of a lack of business, if he patiently wrat at it with full faith that

"In the bright vocabulary of youth There's no such word as FAIL!"

6. HE HAS TACT AND DISCRIMINATION.

THE great thing in assuring men is to use that particular argument at the right moment which will gain the object. Or, which is the same thing, to say just what will carry conviction and lead to immediate and conclusive action—and *nothing more*. Of some men in urging assurance it may be said,

"—— His zeal None seconded, as out of season judged, Or singular, or rash."

Some agents presume too little. Better take for granted that the man you approach will assure. Better assume that he is ready. Approach him saying, "Here is something for your interest; something you want; perhaps the best thing you ever met with." Tell him what it is, and act as if you expected him to close up the matter at once.

Some agents talk too much. Never is a flood of words more out of place than in urging Life Assurance. Don't talk the man to death! Let him have time to breathe, and breathe yourself. Watch the motions of the countenance. Trace the workings of the mind. Mark what pleases. If you have made a point, don't unmake it. Now be cautious in speaking! One indiscreet remark just at this moment may be fatal to your purpose.

Some agents explain too minutely. They are too fear-ful—scrupulous, shall we say—lest the man shall not see everything about the whole subject. So they must argue and demonstrate, until the man's mind is confused, or rendered indifferent. Aim to persuade, to move, rather than to convince. Very likely he believes in assurance now. Address yourself to the one work of leading him on into it.

At a meeting of solicitors the question was once raised: "What tables do you find most popular?" One replied: "I never ask 'what table do you prefer?' I tell him what table he wants, and go about assuring him! I get out the application, and ask for his full name, and hold the pen to write it down; and so carry the man right along with me till the thing is completed!"

Oftentimes a bold move of this kind is most successful. In other cases things must proceed with greater deliberation. At any rate, don't commit the man if there is danger of a refusal. Don't hear it, if given; but leave the matter for some other time.

Let an agent, in these and other particulars, study human nature, and acquire tact and discrimination. If thoughtful and attentive, he will be sure to acquire it, and much more readily than he may imagine.

7. HE SPEAKS THE TRUTH.

"First in the glories of thy front Let the crown-jewel Truth be found."

REQUESTING of an officer in a Life Company to name a subject for an article to agents, he said, "Write on this: How to get along without lying." And he added, "Agents will lie!—they tell anything that suits their purpose—and this gives a bad name to the whole business." Certainly this is far from being true of all agents, but it is true of too many.

It is high time that Life Agents set their faces against this practice of deception. They may rest assured that here, as everywhere, "honesty is the best policy."

"A man of sense will artifice disdain,
As men of wealth may venture to go plain."

In the end misrepresentations are pretty sure to be visited upon the offender's own head; so that

"They that act unjustly Are the worst rebels to themselves."

And how abhorrent the idea of trifling with the confidence of men, and so misleading and deceiving them that they shall hereafter say: "He is dishonest; I would not believe him under oath;" as one was lately heard to say of

an agent who had told him what proved to be untrue in respect to his premiums and dividends.

Benjamin Franklin is often quoted as authority for the value of Life Assurance, and very properly so. But Franklin said, "Let honesty be as the breath of thy soul."

8. He has a Good Reputation.

F an agent's veracity men ought not only to be able to affirm,

You may believe, and pawn your soul upon it;"
but they ought to be able to compliment him throughout as a thoroughly honest and true man.

The remark has been made by somebody, concerning writers, that "it makes all the difference in the world who is behind the pen." If we know that a writer or speaker is tricky, scheming, hypocritical, or corrupt, we refuse to be influenced by him. On the other hand, it is remarkable what weight the words of a man of character have.

All this is equally true in business success. And hence the reputation of an agent in the community should be unequivocally good. It will be found a chief element of strength. Let him aim to be an honor to the Company he represents remembering that it will be judged of by him,

and that he should do nothing to derogate from its good name, or from the reputation of Life Assurance in general. Let him be strictly temperate, and in all respects so bear himself that even his opponents will be compelled to say,

"I've scanned the actions of his daily life With all the industrious malice of a foe, And nothing meets mine eyes but deeds of honor."

9. He is Agreeable in Manners.

REATING everybody in a respectful way, is one of the surest means of getting on in the world. It costs but little, and is worth a great deal. A buffoon,

"Fit for the mountains and the barbarous caves, Where manners ne'er were preached,"

is out of place in a Life Agency. Coarseness, vulgarity, looseness of conversation, repulsive manners—all this is disgraceful, and a serious drawback upon success.

So honorable and beneficent is the vocation of a Life Agent, that we instinctively demand in him a correspondence to the portraiture,

"Tho' modest, on his unembarrassed brow Nature had written "GENTLEMAN.'"
We demand that he shall be

> "— For courtesy, behavior, language, And every fair demeanor, an example."

The pen-picture of a quaint writer, sketching the true gentleman, is worthy of the study of a Life Agent:

"He is above a low thing. He cannot stoop to a mean He invades no secret in the keeping of another. He betrays no secrets confided to his own keeping. He never struts in borrowed plumage. He never takes selfish advantage of one's mistakes. He uses no ignoble weapons in controversy. He never stabs in the dark. He is ashamed of inuendoes. He is not one thing to a man's face, and another behind his back. He may be trusted out of sight -near the thinnest partition-anywhere He buys no offices, he sells none, he intrigues for none. He would cather fail of his rights than win them through dishonor. He will eat honest bread. He tramples on no sensitive feeling. He insults no man. If he have rebuke for another he is straightforward, open, manly, He cannot descend to scurrility. In short, whatever he judges honorable he practices toward every man." To such gentlemanly bearings as this, large tolerance will be yielded, even under the most persistent urgency.

10. He is Devoted to his Calling.

IVE MEN are nowhere more needed than in Assurance Agencies. They are a necessity in a community, and probably always will be, because men will not spontaneously go into Assurance. Instruction, persuasion, reminding them of an imperative duty, is essential. Here is room for the perpetual play of an agent's best powers. Unless he stir up men, a great obligation is passed by unnoticed. There is no adequate substitute for activity among assurance agents. The public is practically incapable of performing its duties without the continual urgency of individuals whose interest it is to importune men to do themselves justice. And it is surprising how much a few energetic minds—one energetic mind, even—may do to wards informing and exciting the public on this subject.

Agents often distrust their ability to succeed in the business of Life assurance to such an extent as will warrant them in devoting their whole time to it, and so they make small gains by other means. But the lesson of experience is, that in order to succeed, all the tact, ability, and energy must be concentrated on this one work.

The essential thing is that the agent be absorbed in his vocation. The largest powers become weak when divided

and dissipated among many aims. Inferior powers are mighty when concentrated. It is very seldom that a man does different things well. Life agents who have rolled up for themselves a splendid income, have not done it by carrying on other matters at the same time. They took up Life Assurance as a business for life; and they prosecuted it with singleness of aim, and an absolute concentration of their best faculties.

11. His Interest is in One Com-

NLESS it is specially understood at the time an agent receives his appointment that he has liberty to solicit applications for other companies, it is expected that he will work exclusively for the company appointing him. The reason is plain. No agent can do full justice to any one company when he is equally interested in advocating the claims of one or two more. He should have his preferences in order to make others have theirs. And the loose, scattering way of offering one thing or another with equal recommendation, is injurious to all

parties. A high authority remarks, that "however it may appear to a novice in the business, it is the uniform testimony of agents who have had large experience in Life Assurance, that it is far best to bring all the ability and enthusiasm one can command to the advocacy of the claims of a single company."

12. CAREFUL IN SELECTING RISKS.

T cannot be too deeply impressed upon the mind of an agent, that poor risks are a damage both to himself and to the company. The officers watch the losses as closely as they do the business of the agent. Some men secure a large number of policies, and at the same time are careless as to the selection of the risks; and the result is that the ratio of the losses through that agent exceed that of the average ratio of the company's risks; and so in the end he is dismissed in digrace, and loses the benefit of his labors, and also his position as a life agent; while those who have done a much smaller business, and done it carefully, are strengthened in the confidence of the company, and permanently retained. One loss in your new field may more than counterbalance the profits of your agency for a year In every way show to the Company that they can rely upon your judgment.



BEGINNING THE BUSINESS.

1. Personal Canvass at the Outset.

EFORE one can become a successful manager of a Life Agency, he must have had actual work in getting applications. This is beginning at the bottom.

Nothing can compensate for the lack of this lesson at the feet of that best teacher,

Experience.

A beginner in the business must therefore begin here. He will in this way learn more in a few days than he would in weeks of theorizing. Let him take right hold of canvassing, without stopping for anything. Let him try his

hand at it, and learn how to use his tools by using them. If you are timid, doubtful, strike out!

"Tender-handed stroke the nettle, And it stings you for your pains; Grasp it like a man of mettle, And it soft as silk remains."

And remember the saying of a French author: "It is the first step that costs." That is the difficult one. Take that; take it rightly, and half the trouble in starting business is got along with.

2. A Policy on his Own Life.

A CIVIL engineer once had finished a complicated railroad bridge, when many speculated and doubted as to its strength. Mounting a huge engine, he ordered it out upon the bridge, and crossed and recrossed at full speed. He thus gave proof of his faith in his own structure.

A Life agent is expected to do likewise. If asked "Are you assured in this Company?" it would be a sorry answer if obliged to say "no!" But if he can say "yes," it will act as an inducement to others. And all the better if he can say "I have a large policy;" naming a heavy amount.

It should be added, that your taking a policy on your own life is evidence to the Company of sincere earnestness in accepting an agency.

It is also an excellent habit to carry your policy, (as well as a list of large policyholders and the sums they are assured for,) in your pocket, and show it on suitable occasions, pointing out its provisions and advantages.

3. FAMILIARITY WITH LIFE ASSUR-

EISURE hours should now be employed in "reading one's self up" as to Life Assurance:—its origin, history, science, and a thousand other facts and particulars. Reports of 'Commissioners' are valuable. A monthly Assurance Journal will be found stimulating and rewarding. An agent should not be a novice. If he shows familiarity with his business it gives other persons confidence in the Company he represents. Then, too, one perfectly familiar with his business, and the relations which exist between the assurer and assured, has the power to enforce the advantages of the whole system of Life Assurance to the conviction of his friends in a manner at once agreeable and pertinent. It requires no great power of persuasion to induce people of ordinary prudence to insure their property against destruction by fire or water, but it does require some power of persuasion, and appropriateness of illustration, to induce one to take a life policy.

Hence, if one would be master of his business, he must be a round-about, full, broad-minded, and ready man.

4. Posted as to his Company.

T is especially necessary that an agent understand all about the Company he represents. Its strong points should be appreciated, and kept prominent. We know agents who say very little, but come right to the special advantages offered by their Company, and generally carry their case.

Where objection is made that in this or that particular some other company surpasses yours in advantages, the agent must be able to give facts. Hence, he should know, and be ready to produce whatever considerations will relieve the apparent difficulty or objection. From this it will be seen how important it is to be thoroughly posted on the comparative merits of his own and other companies.

5. HIS MEDICAL EXAMINER.

HERE the agent has the selection of his medical examiner, one of undoubted skill and soundness of judgment should first of all be sought. If to this be added

agreeable manners, and a pleasant way of approaching and handling men, rather than a brusque, cold, repulsive way, as is sometimes the case, it will be a valuable qualification; for the bearing of the medical examiner has a great deal to do with making it pleasant for applicants.

The agent should also, if possible, induce the physician to take a policy in the office employing him. And where this is not possible, he should use every endeavor to interest the examiner in the success of the agency, and secure his influence and co-operation. In many cases, the consulting physician will give the agent a list of his patrons, and his card as an introduction. It is a great point gained if the doctor be thus enlisted as your helper.

Get the medical examination made at once after obtaining each proposal. See that your doctor attends to it without delay.

6. Acquaintances Registered and Visited.

SOON as a start is thus obtained, the agent should make out a complete list of all his friends and acquaintances, and set about the work of seeing and addressing them personally:— perhaps sometimes sending, in

advance, a card, circular, or office-book. He should not overlook or neglect doubtful cases, for the most unlikely are often the first to assure. He should count no visit lost. Where it is not convenient for the party to give you a hearing now, the interview had better be deferred. There is no use in pressing the matter upon a man's attention when his head is full of something else, or when he is in a hurry, or in bad humor. There may be persistence without giving offense, or provoking a rebuff. And however coldly received, or even insulted, bear it, and when it comes around right, try it again. By all means, never allow yourself to be annoyed; keep your temper on all occasions, and at all times "learn to labor and to wait." Always endeavor to leave a good impression. It will be of value to you at some future time.

J. Making New Acquaintances.

PERSONAL acquaintance with men is your great stock in trade. By every suitable means this should be extended. If starting business in a city or village where you are not generally acquainted, it will be well to turn to the banks, public societies, companies, and associations of various kinds, as found advertised or registered

in the fly-leaves of the *Directory*, and thus ascertain the leading men of the place. Make out a list of those you do not know, and seek means and opportunities of favorable introductions to them. In time, you may approach almost every one of them. It is an advantage, also, to belong to literary and other societies.

8. Getting Names for Reference.

A BOARD of local references can in most cases be readily obtained. But it is of great importance to secure the best known and most respectable citizens. You can frankly state to such that it would be an advantage to have the use of their names, and that you would like to be able to say they are assured in your company. This will be a motive that you can use in soliciting them to take a policy. Those to whom you refer should, if possible, be policy-holders in the company. In very rare cases (of highly distinguished persons) this rule may be departed from.

But, whether holding policies in the company, or not, those to whom you refer should be carefully informed of the peculiarities of the company, and enlisted in its behalf.

To gain this point in respect to a particular individual is often worth any amount of effort.

9. TREATMENT OF OTHER AGENTS.

THERE can be no reason why agents of different companies residing in the same town should not, as a rule, be on good terms with each other. At any rate there should be no discourtesy between them, and all attempts to procure business by depreciation of other agents and companies will generally be to the detractor's disadvantage. Excepting where the unworthiness of a company, or its agent, is notorious, insinuations as to its being in "a dangerous condition," and its officers being "unworthy to be trusted," and the like, prove an injury to Life Assurance generally, and, to say the least, are of doubtful temporary advantage. It is generally sufficient to show the excellencies of your own company.





MANAGING THE BUSINESS.

1. ORDER AND METHOD IN EVERY-

ET the agent keep in mind that "order is heaven's first law." In the office there should be "a place for everything and everything in its place." A slovenly appearance in the office is indicative of careless habits generally.

An agent's books should be systematized and well posted, so that he can turn to any point in a moment. Every possible fact should there be properly recorded; such as his accounts with the company, and with each policyholder, and the residence, &c., &c., of the latter.

And it is very desirable to devote a particular part of each day, regularly, to canvassing. Without this one may do business; with it, he must do it.

2. RELATIONS TO THE HOME OFFICE.

VERY good agent will feel a pleasure in acquiescing with the Company's rules and regulations respecting agencies. He will be prompt and regular in all reports and remittances. He will be frank and honorable, eschewing all double-dealing, secret negotiations with other companies while he is supposed to be acting in good faith for his own, and the like. He will write to the President, or General Agent, confidentially, and show in every way that he has the company's interest at heart. Whatever affects the company's standing or success, he considers as affecting He feels closely identified with it, and therefore works for it with a zest. If the least misunderstanding arises, he is quick to have it explained and made right. At the same time, if there be any points connected with the business that he does not clearly comprehend—such, for instance, as the various methods of assurance offered, the mode of dividing profits, etc., he does not remain in doubt. but writes at once for information.

3. Satisfied with Terms.

SOME agents are given to perpetual uneasiness as to terms, and better chances, etc. But it should not be forgotten, that what is for the *agent's* interest is for the *company's* interest; and that therefore it is to be presumed that a company will deal liberally with its agents. Whatever is reasonable will be pretty sure to be granted.

And an agent may settle this in his mind: that what ever he is worth he will in the end fetch. If he proves himself worthy of a better chance, he will be sure to get it. The thing for him to do, then, is to show that he can do Life business. This is the only thing he need concern himself about at the outset. He only asks a foothold—a chance to demonstrate that he has capacity for this work. If it is in him it will be sure to come out; and he will soon find his level and get as good a position somewhere as he deserves. Two lines in Addison's Cato may well be remembered:

"'Tis not in mortals to command success;
But we'll do more, Sempronius—we'll deserve it!"

4. PROMPT DELIVERY OF POLICIES.

HE delivery of policies should be made as soon as possible after they come into the hands of an agent. Delay may bring a change of mind on the part of an applicant. A large proportion of returned policies would have been taken if agents had promptly and personally attended to their business.

5. Renewals and Rejections.

HEN a payment is to be made upon a policy, it affords an opportunity for the agent to congratulate the assured upon his good investment; to inquire if he does not wish to increase the amount, and if he cannot name some of his friends who might desire to take out policies.

Where a party is rejected from want of sufficiently good health, it is well to ease over the disappointment as far as possible; to advise that he see the medical examiner some other time; and to express the hope that he will yet be able to forward a good application.

6. Helping the Hesitating.

You will come in contact with many men who never can decide to assure. They are convinced, and all but ready to act. But unless helped, they will never "cross the Rubicon." In such a case, get out your forms of proposal, ask for pen and ink, (or, better still, carry a portable ink-stand with you,) and commence filling up the form by asking the full name, etc., etc. An experienced agent remarks that you will find that nineteen men out of twenty will allow you to decide for them that which they would delay for months, or even years, if left to decide it for themselves. At the same time, with some men it will not do thus to assume that they are ready. You must wait their motion.

7. FILLING OUT APPLICATIONS.

READ carefully the directions printed on the margins of the application, or elsewhere, as to particulars, and write out the applications with extreme care, as this application is the basis of a contract upon which possibly widows and orphans may depend for their all. You have no right to peril it by haste or carelessness; or to subject the Company and yourself to delays and annoyances from the same cause.

In filling out the application, write replies to every question distinctly. Insert the full Christian name, both of the applicant and of the person whose life is to be assured.

The signatures must always be the full Christian names. All incomplete and incorrect applications will be returned to you.

8. Resign if Doing Nothing.

OMPLAINTS are often made by companies, that agents who do little or nothing do not throw up their commissions. It is but fair that an appointee either discharge the duties of his office, or vacate it in favor of another. Otherwise, important ground will be unoccupied, and the company will suffer harm from the impression which men get that it is doing no business.

A dead agency is worse than none. When a live man subsequently takes hold of it, he finds its antecedents a serious obstacle. He had a thousand times rather begin anew.

The moment, then, that the agent becomes satisfied that he cannot successfully fill the place, he should signify it to the Company.



ENLARGING THE BUSINESS.

1. WIDENING ONE'S FIELD.

his "field was too narrow," a brother replied, "Then why don't you enlarge it?" Better advice could not have been had. The same counsel might with profit be given to many a man occupying a Life agency which he deems "too contracted." On that same field some other man might be reaping a splendid harvest.

It is all a mistake (we speak as a general rule) to imagine that nothing can be done in a given place because there are "too many companies 4*

operating there," or "the people are pretty much all assured," or there is "too little money in circulation;" or something like it. In one sense, the more companies the better. The mind of the community will likely be stirred up to the matter of assurance, which is an important consideration.

The more people know of this subject the more they will like it. Life Assurance will one day be as common as fire insurance; and you may just as well think of exhausting or overdoing the one as the other. We had rather go into a community where there are a dozen companies, than where an agent had never been, and Life Assurance was wholly a new thing. In fine, no matter what the character of the field is, well directed effort will produce satisfactory results. It is not so much the *field* as the man.

2. STRIKING FOR LARGE POLICIES.

ANY agents err in not aiming high enough when soliciting policies. It is usually well to name a large sum, even if it be rejected. It will help to expand one's ideas, and secure him for a respectable amount.

And again, it is a great mistake to pass by the rich, and be always working at men with small means. "Nothing

venture, nothing have." Try that man of independent means. Don't be afraid! If you secure him, it will make up for many failures. Remember that one policy of ten thousand dollars is worth ten policies of a thousand dollars.

Besides this, it gives standing to your company to identify with it those who are in affluent circumstances.

3. Depending on "Machinery."

It is a trite remark of some one, that "the best way to do a thing is to do it!" While some men are getting ready to work, and "operating" their machinery, others will step in and accomplish the same thing without anybody's knowing it. An English writer says: "there are two kinds of agents. Some of them mean well, yet they think they must have a very large amount of stationery, and plates on their doors, and boards on houses, and large bills to stick about the town, and they are constantly asking for something of this kind. On the other hand, there is another class of agents who do little of this sort of thing. They remind us very much of the owners of two barges which got aground near London Bridge. One of them got a large number of horses, and brought all their strength to bear upon one of the barges, and tore it to pieces; the

other watched for the tide, and when it rose seized the opportunity, and took it safely, with sails and helm, into harbor. Now, what we want agents to do is to seize opportunities, seek for them, and when they find them, not to make a great noise, but do the work right up." While one agent may be puffing his office in every newspaper in his neighborhood from year to year, the working agent is steadily and noiselessly accumulating a large business.

4. EDITORIAL NOTICES.

ND yet we would by no means despise helps and auxiliaries in getting business. One of these is local (and if possible editoral) notices in the papers. It is very rare that this cannot be brought about; if not directly, then through the influence of other parties. One good editorial notice is worth a year's advertisement in the business columns. By all means induce the editor to take a policy, if the thing is possible, so that he can say "We are assured in this Company."

5. Use of Office-Books, etc.

JUDICIOUS distributions of these is desirable.

If the Company is wholly unknown in the community, show-cards, circulars, office-books, annual state-

ments, &c., may be freely given away. In many cases, however, in getting an application, no reading matter will be serviceable. We know agents who, as a rule, just take the tables of the Company in their hands and go out and get business—very rarely using any other printed matter. But where one will "think about it," it is wise to give him something to read, especially if it explains and enforces the assurance of life. So far as documents of any kind are really effective, they are a cheap investment. And they should be put into the hands of those already assured, as well as the unassured. This will increase their confidence, and in many cases they will show them to their friends.

6. Influence of the Minister.

Life agents should cultivate the acquaintance of the clergy, and by every suitable means endeavor to secure their influence. In most cases a minister will give a note of introduction, or a general letter commendatory of the agent and his Company. Often, too, a pastor will furnish a list of the members of his parish most likely to assure.

It is of great importance to effect an assurance upon the minister's life. Where he is unable, or disinclined, some one of his parishioners may be induced to take up the matter and raise the premium, and make a *present* to the pastor of a policy. Suggest this to some one of the members.

7. Sunday-School Teachers.

BECOMING associated with the Sunday-school will not only extend one's usefulness in general, but enhance his success as an agent. It gives him a standing in the community, introduces him to young men of enterprise and growing influence, and identifies him with the congregation and its leader.

8. PROFITING BY DEATHS OF ASSURED.

HERE a life falls in the community with an assurance upon it, especially if it is of great advantage to the surviving members of the family, particulars may be profitably obtained, and the circumstances commented upon. Perhaps the relatives and friends may be induced to assure.

9. Same of the Unassured.

ERY few communities do not furnish examples where a life policy upon the deceased parent would have been a God-send to the afflicted household. It is not only proper to refer to such cases, but an agent is derelict in duty if he does not interpret and apply such providences as a warning against the neglect of Life Assurance. Sudden deaths give especial point to such appeals.

10. NEW ATTENTION TO CANVASS-

THE memorandum book may now be profitably refilled with names of friends, and names of those whose acquaintance may be cultivated. It is ever to be borne in mind, that personal canvass is the one sure clue to a growing success. All other means put together will not amount to so much as the single matter of intelligent activity. Indeed, unless backed by activity they are of no avail. That which pays, and pays with compound interest, is the direct grapple of the agent's mind upon the individual minds of the community.

Write this down as an axiom: "Assurance will not come into my office; I must go out and invite it in; I must, I will, solicit, solicit, solicit!"

11. THE MOTIVE OF PATRONAGE.

A SHREWD agent will make every business relation tell upon his assurance business. The merchant, the mechanic, the banker, the physician, the grocer, the tailor, the printer, may reasonably be solicited to take a policy on the consideration of your patronage. If approached in a delicate way, no man will think the less of you for suggesting this. It is a fair business transaction.

12. NEVER WITHOUT BLANK APPLI-CATIONS.

THE hunter does not go into the woods and fields without ammunition. Neither should the Life agent cross the threshold of his office without being in a condition to "produce the documents," in case they are wanted. The neglect of this simple precaution has lost many an

agent more than one application. While going for the gun the game fled! Be always ready to say, "Well, let us fix it right up now! There's no time like the present!"

13. RECOMMENDING NEW AGENTS.

It is expected of an agent to keep an eye out for stirring business-men, adapted to a Life agency, who might like to change their occupation. These he will recommend to the Home Office for appointment, in case they are wanted either in his own or some other field. If he meets with agents of other companies who desire to dissolve their present connection, it is proper to mention it; but it is not honorable to try to induce them to change companies.

14. OPERATING THROUGH "Bosses," ETC.

IN large business or manufacturing establishments, it is important to get the good-will of the principal head (and assure him if possible), and so obtain favorable access to those in his employ. Very often, also, the superintendent or foreman of a concern is a more useful friend than

even the principal. Or one of the clerks or common workmen may, by proper influences, become of very great advantage in introducing the agent to his associates in the shop or the warehouse.

15. Soliciting the "JNTIMATE FRIEND."

HIS is a most favorable way of introducing the subject of assurance; and the fact that a particular acquaintance has obtained a life policy, will often be a sufficient inducement for him at least to look into the subject of assurance. At the same time, he will naturally think well of the company to which his friend has given the preference. When practicable, get those about to be assured to go with you to their friends, introducing you, and commending to them Life Assurance, and the company you represent. This has great weight.

16. Convincing the Wives.

FTENTIMES women are less favorable to Life Assurance than men. Many a wife absolutely opposes the husband's getting a policy. And others are indifferent

to it, and, at least, do not press the matter till it is accomplished. It will be well to remind such wives that multitudes of their number are suffering to-day from this indifference, or opposition, or, perhaps, foolish superstition; that multitudes will be sorry for it but once, and that is, always. At the same time, urge the tender motive of love to their children.

17. LOOKING AFTER THE NEWLY-MARRIED.

E lately heard a sensible newly-married husband say, that from the time of his marriage until he placed an endowment life-policy of \$5,000 in his desk, he had not drawn a free breath. He felt how totally destitute his wife would be, in case of his death; and he saw no way of meeting his obligation to provide for her support (which he had solemnly pledged himself to do), except by means of Life Assurance. When this was effected, he felt easy. Using such an example, an agent, calling on the newly-married, may also suggest how admirable a present to a bride a handsome life-policy would be. It will be well to precede the call by sending documents, showing the impera-

tive duty of every married man to assure. Make the acquaintance of those about to marry, before the consummation of the event; this will render your chance a better one.

18. Making Each Assured a Helper.

If he be wise in enlarging his business, an agent will be particular to enlist in his interest, so far as he can, erery one who takes a policy. In some cases, a slight compensation may ensure effort in this direction. But in other cases the offer of this would have a contrary effect. Here is room for wisdom and good sense. But it is highly desirable that an agent have numerous influences around him silently operating to his advantage.

19. Applying to Those Already Assured.

ITH some agents it is enough to find that one is already assured. How much better to congratulate him, and ask, "Would you not like to increase the amount?" and if for life, propose an endowment policy.



ARGUMENTS IN URGING ASSURANCE.

RECISELY the motive to be urged in a given case, cannot, of course, with certainty, be specified. Each agent must choose and use his own special argument. We know agents who very seldom use more than one, e. g., that

seldom use more than one, e. g., that of an investment. Others make the endowment feature a specialty. A wise agent will soon see which motive is most effective, and in the main use that. Business arguments will, as a rule, effect far more than sentimental arguments. The argument that tells may, in many individual instances, be a very weak one in itself, but if it an-

swers the purpose, it is everything. The illustration used may be homely, but if it effects its object it is superior to the most elegant metaphor. Confine yourself to a few strong points, and always present them in words so clear that any one can understand them.

We enumerate a variety of considerations, all of which are fair and legitimate motives in urging to action.

1. SCRIPTURE AND DUTY.

SCRIPTURE declares, "If any man provide not for his own, especially those of his own house, he hath denied the faith and is worse than an infidel." And this provision obviously should be made to extend (as it may by Life Assurance), beyond the possible fall of the parent's own life. It is not enough to feed his household daily while living. So far as he can do it, he is bound to see that a table is spread for them when he may no more sit beside it. Just then may they most need this provision.

2. JMMEDIATE PROVISION.

PROVISION for one's dependents should, obviously, be immediate. The old-fashioned slow way of "laying up something for a rainy day," has proved itself

(alas, too often), wholly defective. Death does not wait for these slow accumulations. Not one in ten thousand, in the old way, lays by a competence for his family.

3. It is Found Here.

IFE assurance is an immediate provision. It secures a fortune instantly. The moment a policy is made out and executed, that moment the family is secure against the worst of ills. You may die the next hour, but a fund beyond all question will come to their relief.

4. THE ONLY METHOD KNOWN.

A SSURANCE of life is the only immediate provision. In this respect it stands alone. Prof. E. WRIGHT, of Massachusetts, truly remarks that "LIFE ASSURANCE possesses exclusively the power of creating at once an adequate provision against the destitution of dependents in case of death." Therefore, no other mode of accumulation is equal to this.

5. UNCERTAINTY OF LIFE.

Refer to examples, and to the statistics of sidden deaths. Urge that one knows this—must admit it; and should act on it. Put the case thus: "The chance of your dying within the year is two per cent., while the chance that your dwelling will burn within the year is less than a quarter of one per cent. There are, therefore, Eight Chances That you will die within a week to one that your house will burn within the same time; yet you will hasten on the wings of the wind to insure the latter, and fold your arms with perfect indifference to the former!"

6. Possibility of Sickness.

ENTION the possibility of sickness, making it impossible to get a policy. Specify cases. Urge immediate action lest it be lamented when it is too late. "When the cold shiver runs through the frame, and the fevered tongue, and the short cough appear, it is TOO LATE to rush to the assurance office and offer yourself for examination!"

7. FAMILY AFFECTION,

A FFECTION to one's family is a strong motive. Find out particulars as to the wife, or children, and appeal to the wish to please them and do them good. You may often appeal on the ground of love for a dear *child*. The *father's* heart is tender, though the *man* be made of stone. The appeal may run thus:

"Would you not at this moment make sure a patrimony to your wife, or child, if you could? The instrument is within your reach! It is a Life-Policy!"

8. A Social Obligation.

It is a political and social duty to assure. Refer to its influence upon social life; the solidity it imparts to all institutions; and the protection it affords to industry and labor. Besides this, no person has a right to expose his family to the necessity of public support. It is a wrong to the public. By this means, too, one can be in a condition to have his debts paid, which he is solemnly bound to do.

9. Jts Beneficence.

HERE is a way to do good. Allude to the relief it pours so abundantly upon the bereaved and suffering, and to the countless benefits it scatters along the pathway of human life. Show that by this means pauperism and its frequent consequence, crime, are greatly lessened; and that genteel pauperism (the most cruel form in which the evil appears), can be entirely removed.

10. A MEANS OF SELF-PROTECTION.

IFE Assurance has two features:—beneficence and self-protection. As to the latter, it is found in an endowment policy: by which one secures a certain sum to be paid to himself at a given age, if he live to that age, or if he die earlier, to be paid when he dies, to his heirs. In this way provision is made for a time when one's energies fail, and he may need money rather than be called upon to pay it out, as on a life-policy. Said an old merchant who failed in 1861: "Had I taken an endowment policy

thirty years ago I should not have felt the premiums from year to year, and I should have saved something to support me in my old age, which I could do in no other way."

Urge that hundreds of our best business men are now practically showing their appreciation of this form of life assurance.

11. VARIETY OF JSES.

THE uses and advantages of a life-policy may be presented as a motive. The case may be put thus:

"How convenient for an honest young man, for instance, to turn over a life-policy as security for money which he loans, and which he is sure to pay back IF HE LIVES. Creditors can assure the lives of their debtors, as a security for their claims. A man with incumbrances upon his property may assure to the amount of them, to secure their ready payment at the expiration of his term policy, or at his decease. A young man may raise money to complete his education, or to buy a stock of goods, or tools, or a farm, by assuring his life and assigning the policy as contingent security:" and the like.

12. A GOOD INVESTMENT.

TERY few investments are as profitable as this. Show that many wealthy men are going into Life Assurance merely because it is a good operation They say, "It is the best investment we can make: for in fact it combines the advantages of a Life Assurance, a Savings' Bank, and a safe Investment." Some of them are carrying policies for \$25,000, \$50,000, \$100,000; and one man is known to be assured to the amount of \$250,000. These are among our shrewdest business-men. Show, also, how many a valuable business has been sacrificed by the inability of a widow to wait until a fair price could be obtained, owing to ready money being required. If a merchant, show how valuable a policy becomes at a time of pressure as collateral security. And how, in a long lifetime, it becomes an investment paying a reasonable percentage for capital. And, also, how he can provide for his old age and for his family at the same time, by taking an endowment poli-If he is a member of a firm, point out the value of a provision paid from the business funds on the first of two or three lives, thus securing a safe portion for the widow of the first deceased partner without crippling the concern for those who shall be the survivors.

13. INCREASES CREDIT.

I T increases one's credit and adds to his business reputation. Reputation is money; and it is a mark of foresight, large-mindedness, and economy to assure. A merchant once advertised for a clerk. Out of two hundred applicants for the place, he was influenced in favor of a particular one by the young man's statement that he had kept a life-policy in force for five years.

14. PERSONAL ADVANTAGE.

SHOW that it develops the amiable and generous traits of character; accustoms a man to think for others; induces habits of industry, economy, and accumulation; and, by relieving the mind from anxiety and over-exertion, promotes health and longevity. And then, what a comfort in "the last of earth." How soothing and sustaining the reflection that an ample life-policy will insure the bereaved family against want. Well has a high authority remarked, that, if we gauge the suffering of one manly heart, for that single hour when the films of death are curtaining his loved ones out of sight unprovided for, and remember how many

such agonies Life Assurance has prevented, putting happy and hopeful farewells in their stead, after prolonging life, perhaps, by lightening care, we shall be ready to justify the companies in any necessary expense.

15. JOY TO THE HOUSEHOLD.

EXPLAIN how the whole family feels the sweet influence of Life Assurance. The daughter will not have to be kept from school to sew for a living. The son can get an education, or be set up in business. And even the group of little ones are more blithesome because papa has had recourse to the philosopher's stone that creates a capital in an instant. The wife rejoices in the calm reflection that God has opened to her and the children an effectual door of relief in case their natural protector and support is snatched away. And the husband feels that a load is off his mind. He is a new man. He has done his duty and has a right to trust God and be at peace.

16. A DICTATE OF PRUDENCE.

SIMPLE prudence demands it. Doubtless one reason why mortality is regulated by a law, is, that we might provide against some of the worst calamities attending it.

It is simply wicked to disregard such provisions; just as if sewerage, disinfective agencies, vaccination, lightning-rods, &c., were not used to prevent fevers, cholera, small-pox and destruction by lightning. It were neglecting a providential means of security. So here. And the time is sure to come, if it is not here already, when a man will be deemed just as imprudent to leave his life unassured as to neglect insuring his property. And just as severe censure will be visited in either case.

17 FINAL APPEAL.

HEN you have convinced the judgment, gather up all your powers to move the will. Grapple on to the man. Throw your soul into his soul, your will into his will. Kindly, but firmly, make him answer to his own conscience such questions as these:

"HAVE I DONE MY DUTY TO MY FAMILY? Have I done it to the full extent of my present ability? If I were to die to-night, would those who are dear to me be safe from the pangs of want? Would my children have a comfortable home and means of education? Would my wife be independent of the cold charities of the world? Would my estate pay my debts and leave a competency to my family?

If not, must I not obtain a life-policy before I sleep, and so substitute the CERTAINTY of a SNUG PATRIMONY for the UNCERTAINTY of the continuance of my life?"

If you assure one out of ten of those thus urged, you will do well, and have no reason to be discouraged; and, as to the remaining nine, you may have started in their minds new ideas on the subject, and some of them may eventually give you their applications. Therefore do not be disheartened by lack of immediate success.





HOW TO MEET OBJECTIONS.

F an objection is not started, do not make reference to it. Never anticipate difficulties by bringing them forward yourself; but be ready at every point fairly to meet them when presented We can only hint how this may be done, in a number of cases.

1. Indebtedness.

HEN indebtedness is urged as an objection, show its fallacy, e. g., thus: "If you die with debts unpaid, where will your family be?

If you assure and die, your creditors may be paid at once. Did you ever hear the assignee of a bankrupt blame him for spending money for a LIFE ASSURANCE POLICY? Never."

2. WELL OFF.

If one says he is well off, show that the rich often become poor. Mention cases that the man has known. Also urge that at his death the family would need cash in hand. Thus: "It might take twelve, eighteen, or twenty-four months for your executors to settle up your estate. Were you to die now, would they have enough READY CASH left them to live in the style they now live in, and meet the extra expenses incident to your decease? You think not. Then procure a generous life-policy, which would be IMMEDIATELY CONVERTIBLE INTO MONEY."

3. Religious Scruples.

SOMETIMES religious scruples exist. Show that religion does not forbid, but enjoins, prudence. Allude to the practice of *fire* insurance. Or, put the case thus: "Who is most likely to worry about the fate of his wife and children—a man with a few thousands of dollars laid up for them, or one who has made no provision for them?"

Rev. Dr. Cumming, of London, says: "The assurance of life is one of the most christian things that I know; for what is it? It is taking the load that would crush one family, and spreading it over twenty thousand families; so that a mere drop lights upon each, instead of the overwhelming torrent falling upon one. It seems to me a beautiful illustration of bearing one another's burdens. And, therefore, let every young man entering upon life, every head of a family, whether high or low, set his house in order so far as to assure his life."

4. FEARS AS TO SAFETY.

HERE doubt exists as to the safety of Assurance, show that Life companies have stood secure; that they cannot, if properly managed, fail; and that such companies thrive even upon the ruins of other financial concerns: for, by the mishaps of others, money is increased in value, and it is in money that these institutions deal.

Add, also, that in times of convulsions men rush into Life Assurance, thereby increasing the business of such institutions, and making it profitable. (See, also, page 24.)

5. Expensiveness.

Fits expensiveness is talked of, show that it is not an expense, but an accumulation. It is neither more nor less than an absolutely sure investment of whatever you can, by a well-considered economy, spare, in order to procure, upon the best terms, a sufficiency to support your family, or your own old age when it has grown helpless. But at any rate how little does it cost! Ten cents a day amounts in one year to thirty-six dollars and fifty cents. This sum would secure a life-policy for a man aged twenty-three in the sum of \$2,000; and if he should live to a good age the amount to be paid yearly, if anything, would be very small, or the amount and value of the policy would be largely increased. And add, "Will you not use up your income anyhow? so that what you put in here is so much gained."

6. Making Money Fast.

HEN one urges that he is vigorous and making money, insist that from the superfluity of the present he should provide for the possible imbecility and scarcity of the future; as Joseph directed Pharaoh to lay up from the seven years of plenty against the seven years of famine.

7. Assuring PNE'S SELF.

If one says, "I can assure myself by taking the risk as cheaply as a company can do it for me," show that his may not be an average life as to duration; that the rate of mortality is only certain with respect to a large number of persons.

8. THE SAVINGS BANK.

HEN the objection is that it is better to deposit small moneys in the savings bank, meet it thus: Even if you live, it were better to put them into a Life-Policy. Suppose a person to deposit \$1,000 with a Mutual Life Assurance Company on the accumulative principle (that is, to purchase a fixed policy payable at death), and \$1,000 with a good and reponsible Savings Bank. Mark the result running through the twenty-five intervening years of a person's life, from 25 to 50, as shown in this Table:

		HIS HEIRS WILL RECEIVE FROM								
If he die at the age of		The Savings Bank,				The Assurance			ssurance Company,	
. 30										\$3,425
35			•	1,639						
40				2,097						3,886
45				2,685			٠			4,087
50				3,437						5,273

If, then, with equal security to the depositor, Life Assurance on the Accumulative principle pays a much larger sum to the family than would be paid by the accumulations of a Savings Bank, ought not this mode of investment to be preferred?

9. Using Funds in Business.

DOES the objector assume that he can better use his money in his business? Put the case thus: "Suppose your profits to be twenty-five per cent., or even double that:—no matter what your prosperity. Here is a trifling periodical payment which covers an enormous risk. It covers the risk of your dying in the interim. Can your business do this, or anything approaching it? Suppose, to take the strongest case, you put \$50 in your business, and at the year's end it is likely to become \$250. Yet, even then you had better put your fifty dollars in an Assurance company; for, should you die before the year's end, you would thereby have secured \$2,000 for your family. If you live, so much the better; thank God, and go on again, not forgetting to pay another premium in due time, lest during another year you should not be so fortunate."

10. No FAMILY TIES.

ALTHOUGH one has no family, and may not have one, show that money may be needed in advanced age, and so explain an *endowment* or an *annuity* policy. Also, that some *relative* may be benefited by a policy; or that in this way he might like to *will* something to a benevolent or educational institution.

11. JNABILITY TO CONTINUE.

HERE one fears he cannot continue payments, and so may lose all that is put in, reply, "Have you not had the value of your money in the risk, as in a fire-policy?" And better, "Non-forfeiture prevents the possibility of losing what is put in:" (and so explain this beautiful arrangement.)

12. SOME OTHER TIME.

HEN one says, "I will think of it," it is well to remind him that procrastination is not only "the thief of time," but the murderer of opportunity: that many a family is doomed to want from a similar delay of but a day

or an hour; (refer to examples in American Manual of Life Assurance:) that a man was lately found dead with a blank application in his pocket, which he intended to fill out "to-morrow:" that this is a matter of the first importance, and one usually attends to important things first: that he would not leave his house, store, barn, or shop uninsured a day: and, finally, that to-morrow he may not be assurable, from possible indisposition, accident, or death. Therefore,

"Shun delays; they breed remorse;
Take thy time while time is lent thee.
Creeping snails have weakest force;
Fly their fault, lest thou repent thee.
Good is best when soonest wrought,
Lingering labors come to nought."

For answers to other objections (and these more fully), see American Manual of Life Assurance.

If one will not be persuaded to assure, try to find where the *sticking-point* is, and remove the difficulty by arguing the case out clearly; then, *urge to immediate action*.



CONVENIENT TABLES.

SIMPLE INTEREST TABLE.

showing the Interest at 7 per cent., for one year, payable in advance, on any Sum from One Dollar to One Hundred Dollars.

		1	1 1	1	1 1	1			
Dol.	Int.	Dol.	Int.	Dol.	Int.	Dol	Int.	Dol.	Int.
\$1	\$.07	\$21	\$1.38	\$41	\$2.69	\$61	\$4.00	\$81	\$5.31
2	.13	2.2	1.44	42	2.75	62	4.06	82	5.37
3	.20	23	1.51	43	2.82	63	4.13	83	5.44
4	.26	24	1.57	44	2.88	64	4.19	84	5.50
3 4 5 6	-33	25	1.64	45	2.95	65	4.26	85	5 - 57
6	.39	26	1.70	46	3.01	66	4.32	86	5.63
7 8	.46	27	1.77	47	3.08	67	4.39	87	5.70
8	.52	28	1.83	48	3.14	68	4.45	88	5.76
9	.29	29	1.90	49	3.21	69	4.52	89	5.83
10	.65	30	1.97	50	3.28	70	4.59	90	5.90
11	.72	31	2.03	51	3.34	71	4.65	91	5.96
12	.79	32	2.10	52	3.41	72	4.72	92	6.03
13	.85	33	2.16	53	3 - 47	73	4.79	93	6.09
14	.92	34	2.23	54	3.54	74	4.85	94	6.16
15	.98	35	2.29	55	3.60	75	4.91	95	6.22
16	1.05	36	2.36	56	3.67	76	4.98	96	6.29
17	I.II	37	2.42	57	3.73	77	5.04	97	6.35
18	1.18	38	2.49	58	3.80	78	5.11	98	6.42
19	1.24	39	2.55	59	3.86	79	5.17	99	6.48
20	1.31	40	2.62	60	3.93	80	5.24	100	6.56

COMPOUND INTEREST TABLES—(over.)

Table I on the following pages shows the result of Compound Interest on the Deposit of One Dollar, for any number of years not exceeding 100, at various rates. Table II shows the result of compounding an annual payment of One Dollar at the beginning of each year, for a term of years not exceeding 100. By the use of this Table one can ascertain what a given annual premium paid for any number of successive years will amount to at say six per cent. Multiply the annual ppemium by the sum opposite the number of years, under 6 per cent., in Table 11; this will give the desired result. The same rule applies in relation to Endowment Premiums. To ascertain what rate of interest has been realized by the payment in full of an annual premium for a term of years, divide the total amount of Policy with additions by the annual premium. Then find, in Table II, the number corresponding nearest to the quotient, in the line opposite the number of years the premiums have been paid. The rate of interest at the head of the column containing such number will express approximately the rate realized on the investment. By the combined use of Tables I and II, Results of Five, Ten, or Fifteen Payment Policies may be calculated for any term of years.

1. COMPOUND INTEREST.

Showing the Amount of \$1 improved at Compound Interest, for any number of years not exceeding 100.

					_	
Years.	4 per Ct.	4½ per Ct.	5 per Ct.	6 per Ct.	7 per Ct.	8 per Ct.
I	1.040000	1.045000	1.050000	1,060000	1.070000	1.080000
2	1.081600	1.092025	1.102500	1.123600	1.144900	1.166400
3 4	1.124864	1.192519	1.215506	1.191010	1.225043	1.259712
5	1.216653	1.246182	1.276282	1.338226	1.402552	1.469328
6	1.265319	1.302260	1.340096	1.418519	1.500730	1.586874
7 8	1.315932	2.360862	1.407100	1.503630	1.605781	1.713824
9	1.423312	1.422101	1.477455	1.689479	1.838459	1,050930
10	1.480244	1.552969	1.628895	1.790843	1.967151	2.158925
11	1.539454	1.622853	1.710339	1.898299	2.104852	2.331639
12	1.601032	1.695881	1.795856	2.012196	2.252192	2.518170
13	1.665074	1.772196	1.885649 1.979932	2.132928	2.409845	2.719624
15	1.800944	1.935282	2.078928	2.396558	2.759032	3.172160
16	1.872981	2.022370	2.182875	2.540352	2.952164	3.425943
17	1.947901	2.113377	2.292018	2.692773	3.158815	3.700018
18	2.025817	2.208479	2.406619	2.854339	3.379932 3.616528	3.996020
19 20	2.191123	2.411714	2.653298	3.207135	3.869684	4.315701
21	2.278768	2.520241	2.785963	3.399564	4.140562	5.033834
22	2.369919	2.633652	2.925261	3.603537	4.430402	5.436540
23	2.464716	2.752166	3.071524	3.819750 4 048935	4.740530	5.871464
24	2.563303	2.876014 3.005434	3.386355	4.291871	5.072367 5.427433	6.848475
26	2.772470	3.140679	3.555673	4.549483	5 - 807353	7.396353
27	2.883369	3.282010	3.733456	4.822346	6.213868	7.988061
28	2.998703 3.118651	3.429700	3.920129 4.116136	5.111687 5.418388	6.648838 7.114257	9.317279
29 30	3.243398	3.745318	4.321942	5.743491	7.612255	10.062657
31	3.373133	3.913857	4.538039	6.088101	8.145113	10.867660
32	3.508059	4.089981	4.764941	6.453387	8.715271	11.73708
33	3.648381	4.274030	5.003189	6.840590 7.251025	9.325340	12.676050
34	3.794316	4.667348	5.253348 5.516015	7.686087	9.978114	14.785344
36	4.103933	4.877378	- 5.791816	8.147252	11.423942	15.968172
37	4.268090	5.096860	6.081407	8 • 6 3 6 0 8 7	12.223618	17.245626
38	4.438813	5.326219 5.565899	6.385477 6.704751	9.154252	13.079271	18,625276
39	4.801021	5.816365	7.039989	10.285718	14.974458	21.724522
41	4.993061	6.078101	7.391988	10.902861	16.022670	23.46248
42	5.192784	6.351615	7.761588 8.149667	11.557033	17.144257	25.339482
43	5.400495	6.637438 6.936123	8.149667	12.250455	18.344355	27.366640 29.555972
45	5.841176	7.248248	8.985008	13.764611	21.002452	31.920449
46	6.074823	7.574420	9.434258	14.590487	22.472623	34.474085
47	6.317816	7.915268 8.271456	9.905971	15.465917	24.045707	37.232012
48	6.570528 6.833349		10.401270	16.393872	25.728907	40.210573
49	7.106683	8.643671 9.032636	10.921333	17.377504	27 529930	46.901613

COMPOUND INTEREST, I.—(CONTINUED.)

Showing the Amount of \$1 improved at Compound Interest, for any number of years not exceeding 100.

		1	1	1	1	1
Years.	4 per Ct.	4½ per Ct.	5 per Ct.	6 per Ct.	7 per Ct.	8 per Ct.
51	7.390951	9.439105	12.040770	19.525364	31.519017	50.653742
52	7.686589	9.863865	12.642868	20.696885	33.725348	54.706041
53	7.994052	10.307739	13.274949	21.938698	36.086122	59.082524
54	8.313814	10.771587	13.938696	23.255020	38.612151	63.809126
55	8.646367	11.256308	14.635631	24.650322	41.315001	68.913856
56	8.992222	11.762842	15.367412	26.129341	44.207052	74.426965
57	9.351910	12.292170	16.135783	27.697101	47.301545	80.381122
58	9.725987	12.845318	16.942572	29.358927	50.612653	86.811612
59	10.115026	13.423357	17.789701	31.120463	54.155539	93.756540
60	10.519627	14.027408	18.679186	32.987691	57.946427	101.257064
61	10.940413	14.658641	19.613145	34.966952	62.002677	109.357629
62	11.378029	15.318280	20.593802	37.064969	66.342864	118.106239
63	11.833150	16.007603	21.623493	39.288868	70-986865	127.554738
64	12.306476	16.727945	22.704667	41-646200	75.955945	137.759117
65	12.798735	17.480702	23-839901	44.144972	81.272861	148.779847
-66	13.310685	18.267334	25.031896	46.793670	86.961962	160.682234
67	13.843112	19.089364	26.283490	49.601290	93.049299	173.536813
68	14.396836	19.948385	27.597665	52.577368	99.562750	187.419758
69	14.972710	20.846063	28.977548	55.732010	106.532142	202.413339
70	15.571618	21.784136	30.426426	59-075930	113.989392	218.606406
71	16.194483	22.764422	31.947747	62.620486	121.968650	236.094918
72	16.842262	23.788821	33.545134	66.377415	130.506455	254.982512
73	17.515953	24.859318	45.222391	70.360378	139.641907	275.381113
74	18.216591	25.977987	36.983510	74.582001	149.416840	297.411602
75	18.945255	27.146996	38.832686	79.056921	159.876019	321.204530
.76	19.703065	28.368611	40.774320	83.800336	171.067341	346.900892
77	20.491187	29.645199	42.813036	88.828356	183.042054	374.652964
78	21.310835	30.979233	44.953688	94.158058	195.854998	404.625201
79	22.163268	32.373298	47.201372	99.807541	209.564848	436.995217
80	23.049799	33.830096	49.561441	105.795993	224.234388	471.954834
81	23.971791	35.352451	52.039513	112.143753	239.930795	509.711221
82	24.930663	36.943311	54.641489	118.872378	256.725950	550.488119
83	25.927889	38.605760	57.373563	126.004721	274.696767	594.527168
84	26.965005	40.343019	60.242241	133.565004	293.925541	642.089342
85	28.043605	42.158455	63.254353	141.578904	314.500328	693.456489
86	29.165349	44.055586	96.417071	150.073639	336.515351	748.933008
87	30.331963	46.038087	69.737925	159.078057	360.071426	808.847649
88	31.545242	48.109801	73.224821	168.622740	385.276426	873.555461
89	32.807051	50.274742	76.886062	178.740105	412.245776	943.439897
90	34.J19333	52.537105	80.730365	189.464511	441.102980	1018.91509
91	35.484107	54.901275	84.766883	200.832382	471.980188	1100,42830
92	36.903471	57.371832	89.005227	212.882325	505.018802	1188,46256
93	38.379610	59.953565	93.455489	225.655264	540.370118	1283,53956
94	39.914794	62.651475	98.128263	239.194580	578.196026	1386,22273
95	41.511386	65.470792	103.034676	253.546255	618.669748	1497,12055
96	43.171841	68.416977	108.186410	268.759030	661.976630	1616,89019
97	44.898715	71.495741	113.595731	284.884572	708.314994	1746,24141
98	46.694664	74.7-3050	119.275517	301.977646	757.897044	1885,94072
99	48.562450	78.075137	125.239293	320.096305	810.949837	2036,81598
100	50.504948	81.588518	131.501258	339.302084	867.716326	2199,76126

COMPOUND INTEREST, II.

The amount of \$1 per annum in any number of Years.

Years.	4 per Cent.	4½ per Cent.	. 5 per Cent.	6 per Cent.
1 - 2 3 4 5	1.000000 2.040000 3.121600 4.246464 5.416323	1.000000 2.045000 3.137025 4.278191 5.470710	1.000000 2.050000 3.152500 4.310125 5.525631	1.000000 2.060000 3.183600 4.374616 5.637093
6 7 8 9	6.632975 7.898294 9.214226 10.582795 12.006107	6.716892 8.019152 9.380014 10.802114 12.288209	6.801913 8.142008 9.549109 11.026564 12.577893	6.975319 8.393838 9.897468 11.491316 13.180795
11 12 13 14	13.486351 15.025805 16.626838 18.291911 20.023588	13.841179 15.464032 17.159913 18.932109 20.784054	14.206787 15.917127 17.712983 19.598632 21.578564	14.971643 16.869941 18.882138 21.015066 23.275970
16	21.824531	22.719337	23.657492	25.672528
17	23.697512	24.741707	25.840366	28.212880
18	25.645413	26.855084	28.132385	30.905653
19	27.671229	29.063562	30.539004	33.759992
20	29.778079	31.371423	33.065954	36.785591
21	31.969202	33.783137	35.719252	39.992727
22	34.247970	36.303378	38.505214	43.392290
23	36.617889	38.937030	41.430475	46.995828
24	39.082604	41.689196	44.501999	50.815577
25	41.645908	44.565210	47.727099	54.864512
26 27 28 29	44.311745 47.084214 49.967583 52.966286 56.084938	47.570645 50.711324 53.993333 57.423033 61.007070	51.113454 54.669126 58.402583 62.322712 66.438848	59.156383 63.705766 68.528112 73.639798 79.058186
31	59.328335	64.752388	70.760790	84.801677
32	62.701469	68.666245	75.298829	90.889778
33	66.209527	.72.756226	80.063771	97.343165
34	69.857909	77.030256	85.066959	104.184755
35	73.652225	81.496618	90.320307	111.434780
36	77.598314	86.163966	95.836323	119.120867
37	81.702246	91.041344	101.628139	127.268119
38	85.970336	96.138205	107.709546	135.904206
39	90.409150	101.464424	114.095023	145.058458
40	95.025516	107.030323	120.799774	154.761966
41	99.826536	112.846688	127.839763	165.047684
42	104.819598	118.924789	135.231751	175.950545
43	110.012382	125.276404	142.993339	187.507577
44	115.412877	131.913842	151.143006	199.758032
45	121.029392	138.849965	159.700156	212.743514
45	126.870568	146.098214	168.685164	226.508125
47	132.945390	153.672633	178.119422	241.098612
43	139.263206	161.587902	188.025393	256.564529
49	145.833734	169.859357	199.426663	272.958401
50	152.667084	178.503028	209.347996	290.335905

COMPOUND INTEREST, II.—(CONTINUED.)

The amount of \$1 per annum in any number of Years.

Years.	4 per Cent.	4½ per Cent.	5 per Cent.	6 per Cent.
51	159.773767	187.535665	220.815395	308.756059
52	167.164718	196.974769	232.856165	328.281422
53	174.851306	206.838634	245.498974	348.978308
54	182.845359	217.146373	258.773922	370.917006
55	191.159173	227.917959	272.712618	394.172027
56	199.805540	239.174268	287.348249	418.822348
57	208.797762	250.937110	302.715662	444.951689
58	218.149672	263.229280	318.851445	472.648790
59	227.875659	276.074597	335.794017	502.007718
60	237.990685	289.497954	353.583718	533.128181
61	248.510313	303.525362	372.262904	566.115872
62	259.450725	318.184003	391.876049	601.082824
63	270.828754	333.502283	412.469851	638.147793
64	282.661904	349.509886	434.093344	677.436661
65	294.968381	366.237831	456.798011	719.082861
66	307.767116	383.718533	480.637912	763.227832
67	321.074800	401.985867	505.669807	810.021502
68	334.920912	421.075231	531.953298	859.622792
69	349.317749	441.023617	559.550963	912.200160
70	364.290459	461.869680	588.528511	967.932170
71	379.862077	483.653815	618.954936	1027.008100
72	396.956560	506.418237	650.902683	1089.628586
73	412.898823	530.207057	684.447817	1156.006301
74	430.414776	555.066375	719.670208	1226.366679
75	448.631367	581.044362	756.653718	1300.948680
76	467.576621	608.191358	795.486404	1380.005601
77	487.279686	636.559969	836.260725	1463.805937
78	507.770874	666.205168	879.073761	1552.634293
79	529.081708	697.184401	924.027449	1646.792350
80	551.244977	729.557699	971.228821	1746.599891
81	574.294776	763.387795	1020.790262	1352.395885
82	598.266567	798.740246	1072.829775	1964.539638
83	623.197230	835.683557	1127.471264	2083.412016
84	649.125119	874.289317	1184.844827	2209.416737
85	676.090124	914.632336	1245.087069	2342.981741
86	704.133728	956.790791	1308.341422	2484.560646
87	733.299078	1000 846377	1374.758493	2634.634285
88	763.631041	1046.884464	1444.496418	2793.712342
89	795.176282	1094.994265	1517.721239	2962.335082
90	827.983334	1145.269007	1594.607301	3141.075187
91	862.102667	1197.806112	1675.337666	3330.539698
92	897.586774	1252.707387	1760.104549	3531.372080
93	934.490245	1310.079219	1849.109777	3744.254405
94	972.869854	1370.032784	1942.565265	3969.909669
95	1012.784649	1432.684259	2040.693529	4209.104250
96 97 98 99	1054.296035 1097.467876 1142.366591 1189.061255 1237.623705	1498.155051 1566.572028 1638.067770 1712.780819 1790.855956	2143.728205 2251.914615 2365.510346 2484.785864 2610.025157	4462.650505 4731.409535 5016.294107 5318.271753 5638.368059

COMPOUND INTEREST, II.—(CONTINUED.)

The amount of \$1 per annum in any number of years.

Years.	7 per Cent.	8 per Cent.	9 per Cent.	19 per Cent
1	1.00000	1,000000	1.000000	1,00000
2	2.07000	2,080000	2.090000	2,10000
3	3.21490	3,246400	3.278100	3,31000
4	4.439943	4,506112	4.573129	4,641d0
5	5.750739	5,866601	5.984711	6,10510
6 7 8 9	7.153291 8.654c21 10.259803 11.977989 13.816448	7.335929 8.922803 10.636628 12.487558 14.486562	7.523335 9.200435 11.028474 13.021036 15.192930	7.71561 9.48717 11.43588 13.57947 15.93742
11	15.783599	16.645487	17.560293	18.53116
12	17.888451	18.977126	20.140720	21.38428
13	20.140643	21.495297	22.953385	24.52271
14	22.550488	24.214920	26.019189	27.97498
15	25.129022	27.152114	29.360916	31.77248
16	27.888054	30.324283	33.003399	35.94973
17	30.840217	33.750226	36.973705	40.54479
18	33.999033	37.450244	41.301338	45.59917
19	37.378965	41.446263	46.018458	51.15909
20	40.995492	45.761964	51.160120	57.27499
2 I	44.865177	50.422921	56.764530	64.00249
2 2	49.005739	55.456755	62.873338	71.40274
2 3	53.436141	60.893296	69.531939	79.54302
2 4	58.176671	66.764759	76.789813	88.49732
2 5	63.249038	73.105940	84.700896	98.34705
26	68.676470	79.954415	93.323977	109,18176
27	74.483823	87.350768	102.723135	121,09994
28	80.697691	95.338830	112.968217	134,20993
29	87.346529	103.965936	124.135356	148,63093
30	94.460786	113.283211	136.307539	164,49402
31	102.073041	123.345868	149.575217	181.94342
32	110.218154	134.213537	164.036987	201.13776
33	118.933425	145.950620	179.800315	222.25154
34	128.258765	158.626670	196.982344	245.47669
35	138.236878	172.316804	215.710755	271.02436
36	148.913460	187.102148	236.124723	299.12680
37	160.337402	203.070320	258.375948	330.03948
38	172.561020	220.315945	282.629783	364.04343
39	185.640292	238.941221	309.066463	401.44777
40	199.635112	259.056519	337.882445	442.29255
41	214.609570	280.781040	369.291865	487.85181
42	230.632240	304.243523	403.528133	537.63699
43	247.776496	329.583005	440.845665	592.40069
44	266.120851	356.949646	481.521775	652.64076
45	285.749311	386.505617	525.858734	718.90483
46	306.751763	418.426067	574.186021	791.79532
47	329.224386	452.900152	626.862762	871.97485
48	353.270093	490.132164	684.280411	960.17233
49	378.999000	530.342737	746.865648	1057.18957
50	406.528929	573.770156	815.083556	1163.90852

COMPOUND INTEREST, II.—(CONTINUED.)

The amount of \$1 per annum in any number of years.

			· · · · · · · · · · · · · · · · · · ·	
Years.	7 per Cent.	8 per Cent.	9 per Cent.	10 per Cent.
51	435.985955	620.671769	889.44.070	1281.299382
52	467.504971	671.325510	970.490773	1410.429320
53	501.230319	726.031551	1058.834943	1552.472252
54	537.316442	785.114075	1155.130088	1708.719477
55	575.928593	848.921201	1260.091796	1880.591425
56	617.243594	917.837058	1374.500057	2069.650567
57	651.450646	992.264022	1499.205063	2277.615624
58	708.752191	1072.645144	1635.133518	2505.377186
59	759.364844	1159.456755	1783.295535	2758.014905
60	813.520383	1253.213296	1944.792133	3034.816395
61	871.466810	1354.470360	2120.823425	3339.298035
62	933.469487	1463.827988	2312.697533	3674.227838
63	999.812351	1531.934227	2521.840311	4042.650622
64	1070.799216	1709.488966	2749.805939	4447.915685
65	1146.755161	1847.248083	2998.288474	4893.707253
66	122S.028022	1995.027929	3269.134436	5384.077978
67	1314.989983	2156.710164	3564.356535	5923.485776
68	1408.039282	2330.246977	3886.148624	6516.834354
69	1507.602032	2517.666735	4236.902000	7169.517789
70	1614.134174	2720.080074	4619.223180	7887.469568
71	1728.123566	2938.686480	5035.953266	8677.216525
72	1850.092216	3174.781398	5490.189060	9545.938177
73	1980.598671	3429.763910	5985.306075	10501.531995
74	2120.240578	3705.145023	6524.983622	11552.685195
75	2269.657419	4002.555624	7113.232148	12708.953714
76	2429.533438	4323.751154	7754.423041	13980.849089
77	2600.600779	4670.662047	8453.321115	15379.933994
78	2783.642833	5045.315011	9215.120015	16918.927399
79	2979.497831	5449.940211	10045.480817	18611.82013
80	3189.062680	5886.935428	10950.574090	20474.002146
81	3413.297067	6358.890263	11937.125758	22522.402360
82	3653.227862	6868.601484	13012.467077	24775.642590
83	3909.953812	7419.089602	14184.589114	27254.206850
84	4184.650579	8013.616770	15462.202134	29980.627542
85	4478.576120	8655.706112	16854.800326	32979.690290
86	4793.076448	9349.162601	18372.732355	36278.659326
87	5129.591799	10098.095609	20027.278267	39907.525258
88	5489.663225	10906.943258	21830.733311	43899.27778
89	5874.939651	11780.498718	23796.499309	48290.20556
90	6287.185427	12723.938616	25939.184247	53120.226116
91	6728.288407	13742.853705	28274.710829	58433.248736
92	7200.268595	14843.282002	30826.434804	64277.57360
93	7705.287397	16031.744562	33595.273936	70705.33096.
94	8245.657515	17315.284127	36619.848590	77777.96466
95	8823.853541	18701.506857	39916.634964	85556.766466
96	9442.523288	20198.627405	43510.132110	94113.43651
97	10104.499919	21815.517598	47427.044000	103525.78016.
98	10812.814913	23561.759005	51696.477960	113879.358180
90	11570.711957	25447.699726	56350.160977	125268.29399
100	12381.661794	27484.515704	61422.675465	137796.12339

STANDARD MORTALITY TABLES.

DESCRIPTION.*

No. 1.—HALLEY'S BRESLAU TABLE.

This Table was deduced by the celebrated Astronomer Edmund Halley, from a series of life registers kept by Dr. Neumann in the city of Breslau in Silesia during the years 1687–91, and was the first Life Table which had any pretensions to accuracy. It was, however, regarded as inapplicable to English lives, and has, consequently, never been used by English companies. By arranging the numbers in the second column of this Table, Dr. Halley, all unconsciously, laid the foundation of the science of life contingencies.

No. 2.—PRICE'S LONDON TABLE.

This Table was arranged by Dr. RICHARD PRICE from the bills of mortality recorded in London during the years 1759–1768. It gives a high rate of mortality, and has not been used in the business of Life Assurance.

No. 3.—PRICE'S SWEDISH TABLE.

This was the first National Life Table ever made, and was composed by the eminent Statistician Dr. RICHARD PRICE, from data obtained by M. WARGENTIN, of Stockholm, from seven different enumerations of the whole population of the Kingdom of Sweden, each repeated at the

^{*} For the purpose of securing absolute accuracy, the tables which follow (with the descriptive matter) are those carefully collated and published in the Insurance Reports of the State of New York.

end of three years, viz., in 1757, 1760, 1763, 1766, 1769, 1772, and 1775. It is commended for its general accuracy, but, owing apparently to national preferences, has not been used in England.

No. 4.—Deparcieux's French Table.

This Table was calculated by M. Deparcieux from the lists kept of the nominees of the Tontines of Paris and from the records of the deaths of Parisian annuitants from 1696 to 1742. It has been well approved as giving a near approximation to the expectation of assured lives.

The results of M. Deparcieux's calculations were afterward verified by comparison with the mortuary registers of several religious houses of both sexes in France.

This Table is referred to by Francis Baily in his Treatise upon the Doctrine of Annuities and Assurances (p. 14), published in 1813, as particularly fitted to form a proper basis for determining the value of annuities.

No. 5.—Price's Northampton Table.

This Table was formed by Dr. RICHARD PRICE from registers kept in the Parish of All-Saints in the town of Northampton, England, during the years 1735 to 1780. Although exceedingly unjust in giving a too high rate of mortality, particularly for the younger and middle ages, it was the first Life Table brought into use as a basis for the computation of Life premiums, having been adopted by the Equitable on its establishment in the year 1762. The Northampton Table long continued in much favor with the companies, as insuring an abundantly safe rate of premium; so much so, indeed, as to secure a higer profit, with-

out loading, than is obtained under many other Tables even with the addition of a loading of 20 or 30 per cent. This Table is still used by a majority of the old Life Offices in England as the basis for their rates of premium. In making valuations, however, the results are generally checked by calculations on the Carlisle or some other modern Table.

No. 6.—MILNE'S CARLISLE TABLE.

This Table was formed by the eminent Actuary Joshua Milne, from the observations of Dr. Heysham on the mortality of Carlisle, England, for the years 1778–87. Though somewhat defective in graduation, it is far more satisfactory than the Northampton Table in its approach to accuracy; for which reason it is extensively used in England and very generally in this country.

No. 7.—Davies's Equitable Table.

Constructed by the distinguished Actuary Griffith Davies, of London, and revised by Mr. Morgan in 1834. This was the first Table based upon the records of assured lives, being the experience of the Equitable Society from its foundation in 1762 to 1829.

No. 8.—Actuaries' or Combined Experience Table.

This Table is based upon the recorded experience of seventeen Life Companies in England, and was deduced from 62,537 assurances, under the superintendence of a committee of accomplished actuaries. The Table was published by Actuary Jenkin Jones in 1843, and furnishes a very accurate graduation of assured lives.

No. 9.—Quetelet's Belgian Table.

This Table was compiled and published in 1856 by the distinguished philosopher Adolphe Quetelet, of Brussels. It shows a higher rate of mortality than the English Tables. In the form here presented, the Table gives the combined decrement and expectation of male and female lives.

No. 10. - FARR'S ENGLISH TABLE No. 1.

For this very accurate Table the public are indebted to the philanthrophic and praiseworthy efforts of the indefatigable physician William Farr, of London. It was compiled from the entire census returns of lives and deaths at all ages, in the realm of England, during the year 1841, and published in the Sixth Report of the Registrar-General.

No. 11—FARR'S ENGLISH TABLE No. 2.

This was calculated by Dr. William Farr, subsequently to his Table No. 1, from the deaths throughout the whole of England dusing the seven years 1838–44. From these data the calculations were made according to a plan recommended by Professor De Morgan and Mr. Griffith Davies.

No. 12.—FARR'S ENGLISH TABLE No. 3.

The rate of mortality deduced from this Table is higher than is given by the Carlisle Table or by either of the two former English Life Tables of the author. It is more regular in its graduation than the Carlisle Table, while at the same time its rate approximates more nearly that assigned to American life.

124
I. BRESLAU TABLE (Edmund Halley).

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 6 27 28 29 30 31 32 3 34 35 36 37 38 39 40 41 24 43 44 44 44 44 44 44 44 44 44 44 44 44	1000 855 798 760 732 710 692 680 670 661 653 646 628 622 616 610 604 598 592 586 579 573 567 560 553 549 549 490 481 472 463 445 436 445 445 445 445 445 445 445 445 445 44	145 57 38 28 22 10 9 8 7 6 6 6 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7	33.22 37.77 39.43 40.38 40.90 41.16 41.22 40.94 40.54 40.08 39.57 38.35 37.71 37.07 36.42 35.77 35.12 34.46 33.14 32.49 31.85 31.29 30.51 29.26 28.63 27.99 27.41 26.23 25.64 25.64 24.15 23.26 24.15 25.04 24.15 25.04 24.15 25.04 24.15 25.04 26.25 27.26 27.99 27.41 26.25 27.26 27.99 27.41 26.25 26.25 26.25 27.99 27.41 26.25 26.25 27.99 27.41 26.25 27.99 27.41 26.25 27.99 27.41 27.66 28.26 29.27 29.26 29.36 29	46 47 48 49 50 51 52 53 54 55 56 67 58 59 60 61 62 63 64 65 66 66 67 77 77 78 77 77 77 77 77 77 7	387 377 367 346 335 324 313 302 292 282 272 262 252 242 212 202 192 162 172 162 172 162 193 88 88 58 49 41 31 31 31 30 30 31 30 31 30 31 31 30 31 31 30 31 31 31 31 31 31 31 31 31 31 31 31 31	10 10 10 11 11 11 10 10 10 10 10 10 10 1	19.05 18.55 18.04 17.53 17.07 16.61 16.16 15.71 15.26 14.27 14.27 13.79 12.91 12.79 12.30 11.77 11.32 10.83 10.244 9.86 9.37 8.89 8.40 7.93 7.49 5.51 5.15 4.84 4.08 3.54 4.08 3.54 3.19 2.76 2.37 2.05

125
II. LONDON TABLE (RICHARD PRICE).

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation
0 I	1518	486	17.90	46 47	262 252	10	
2	832	85		48	242	9	
4	747 688	59 42		49 50	233 224	9 9 8 8 .	15.84
5	646	23	35.28	51 52	215 206	9 8.	
3 4 5 6 7 8	603 589	14. 12		53 54	198		
9	577	10	24.07	55	183	7	13.91
II ·	567 558	9	34.91	57	176 169	7	
12	549 541	8 7		58 59 60	162 155	7 7 7 7 7 8 8	
14	534 528	9 8 7 6 6	33.32	60 61	147 139	8 7	11.69
16	522 515		33.3	62 63	132	7 7	
17 18	-508	7		64	118	7	- 6-
19	501 494	7 7	29.37	65 66	111	- 7	9.69
2I 22	487 479	8 8		67 68	97 90	7 7	
23	471 463	7 7 7 7 7 8 8 8 8		69 70	83 76	7 7 7 7 7 7 7 6 6 6	8.00
25	455	8	26.66	71	70	6	0.00
26 27 28	447	8		72 73	64 58	5	
28	43I 422	9		74 75	53 48	5	6.27
30 31	413 404	9 9	24,11	75 76	43 38	5 5 5 5 4 4 3 3	
32	395 386	9 9		77 78	33	4	
33	377 368	9		79 80 81	25	3	4.86
35 36	359	9	21.76	82	19	3	
37 38	350 341	9		83 84	16	3 2	
39 40	332 322	10	19.50	85 86	11	2 2	3.04
41	312 302	IO		87 88	9 7	2 I	
42 43	292	10		89	5	I	
44 45	282 272	10	17.63	90	3	I	

126
III. SWEDISH TABLE (RICHARD PRICE).

	1		1	1	1	1	
Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
0	10000	2195	34.42	49	3924	78	19.09
I 2	7805 7296	509 344	42.95 44.92	50	3846 3761	85 87	18.46 17.87
	6952	245	46.11	52	3674	90	17.29
3 4 5 6	6707	143	46.78	53	3584	90	16.70
5	6564	122	46.79 46.65	54	3494	91	16,12
7	6442	105 87	46.43	55	3403 3312	91 92	15.53 14.95
7 8	6250	73	46.07	57 58	3220	95	14.37
9	6177	62	45.61	58	3125	95	13.79
10	6115	54	45.07 44.38	59 60	3030 2930	100	13.21 12.63
11	6016	45 42	43.70	61	2822	114	12.03
13	5974	38	43.01	62	2708	118	11.62
14	5936	37	42.33	63	2590	118	11,11
16	5899 5862	37 40	41.64	64	2472 2354	118	10,61 10,10
	5822	40	40.19	66	2236	118	9.62
17	5782	42	39.47	67	2118	121	9.15
19	5740	43	38.74	68	1997	124	8.67
20 21	5697 5650	47	38.02 37.33	69	1873 1749	124	8.20 7.72
22	5603	47 48	36.64	71	1622	133	7.32
23	5555	48	35.96	72	1489	135	6.89
24	5507	50	35.27	73	1354	140	6.53
25 26	5457 5407	50 52	34.58 33.91	74 .	1214	130	6.23 5.91
27	5355	54	33.23	76	963	115	5.59
28	5301	55	32.56	77 78	848	105	5.28
29	5246	55	31.88		743	95	4.96 4.61
30	5191 5132	59 60	31.21	79 80	648 558	90	4.01
32	5072	62	29.94	81	468	90 84	4.01
33	5010	63	29.30	82	384	75	3.80
34	4947 4884	63 59	28.67 28.03	83 84	309 244	65 55	3.57
35 36	4825	58	27.31	85	189	45	3.39 3.23
	4767	58	26.68	86	144	35	3.09
37 38	4709	58	26.01	87 88	109	27	2.92
39	4651	60 65	25.33 24.66	88 89	82 62	20 I5	2.7I 2.43
40 41	4591 4526		24.05	90	47	14	2.05
42	4453	73 78	23.44	91	33	12	1.71
43	4375	78	22.83	92	21	10	1.40
44	4297 4219	78 76	22.22 21.61	93 94	5	3	I,23 I,IO
45 46	4143	74	20.98	95	2	I	1.00
47	4069	72	20.35	96	1	I	0.00
48	3997	73	19.72	97	0	- 1	

IV. FRENCH TABLE (M. DEPARCIEUX).

127

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
3	1000	30	47.71	49	590	9	21.07
	970	22	48.17	50	581	Ió	20.38
4 5 6	. 948	18	48.27	51	571	11	19.73
6	930	15	48.20	52	560	II	19.11
7 8	915	13	47.98	53	549	I I I 2	18.48 17.85
	902 890	12 10	47.66 47.30	54	538 526	12	17.05
9	880	8	46.83	55 56	514	12	16.64
II	872	6	46.26	57	502	13	16.02
12	866	6	45.58	58	489	13	15.44
13	860	6 6 6	44.89	59 60	476	13	14.84
14	854	6	44.20		463	13	14.25
15 16	848 842		43.51 42.82	61	450	13	13.65 13.04
17	835	7	42.17	63	437	14	12.43
17	828	7	41.52	64	409	14	11,86
19	821	7	40.87	65	395	15	11.26
20	814	8	40.22	66	380	16	10.69
21	806	8	39.62	67 68	364	17	10.14
22	798 790	8	39.00 38.40	69	347 329	18 19	9.61
24	782	8	37.78	70	310	19	8.64
25	774	8	37.17	71	291	20	8.17
26	766	8	36.55	72	271	20	7.73
27 28	758	8	35.93	73	251	20	7.31 6.90
	750	8	35.30	74	231	20	6.90
29 30	742	8	34.69	75 76	211 192	19	6.50 6.10
31	734	8	, 34.06 33.29	70	173	19	5.71
32	718	8	32.80	77 78	154	18	5.36
33	710	77778888888888888888888888888888888888	32.16	79	136	18	5.00
34 .	702	8	31.52	80	118	17	4.69
35 36	694	8	30.88	81 82	IOI	16	4.39
30	678		30.23 29.58	83	85 71	14 12	4.01 3.84
37 38	671	7	28.89	84		II	3.52
39	664	7	28.18	85	59 48	10	3.21
40	657	7 7 7 7	27.48	86	38	9	2.92
41	650	7	26.77	87 88	29	7 6	2.67
42	643	7 7	26.06	88	22 16		2.36
43 44	629	7	25.34 24.62	90	10	5 4	1.77
45	622	7	23.89	91	7	3	1.50
45 46	615	7 8	23.15	92	4	2	1.25
47 48	607	8	22.45	93	2	I	1.00
48	599	9	21.74	94	1 1	1	0.00

V. NORTHAMPTON TABLE (RICHARD PRICE).

128

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
Age. O 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 30 31 32 33 4 35 36 37 38 39	Living. 11650 8650 7283 6781 6446 6249 6065 5815 5735 5675 5623 5573 5523 5473 5523 5473 5423 5473 5423 6468 4485 4610 4485 4610 4485 4610 4485 4610 4385 4610 4385 4610 4385 4610 4385 4610 4385 4780 4785 4780 4785 4780 4785 4780 4785 4785 4785 4785 4785 4785	3000 1367 502 335 197 184 140 80 60 50 50 50 50 50 50 50 75 75 75 75 75 75 75 75	Expectation. 25.18 32.74 37.79 39.55 40.84 41.07 41.03 40.79 40.36 39.78 39.14 38.49 37.83 37.17 36.51 35.85 35.20 34.58 33.99 33.43 32.90 32.39 31.88 31.36 30.85	Age. 49 50 51 52 53 54 556 57 58 60 61 62 63 64 65 66 77 72 73 74 75 76 77 78 79 80 81 82 83 84 85 88 87 88	2936 2857 2776 2694 2612 2530 2448 2366 2284 2202 2038 1956 1874 1793 1712 1632 1152 1472 1392 1472 1392 1472 1392 1472 1392 1472 1392 1472 1392 1472 1392 1472 1472 1472 1472 1472 1472 1472 147	79 81 82 82 82 82 82 82 82 82 82 82 82 80 80 80 80 80 80 80 80 80 80 80 80 80	18.49 17.99 17.50 17.50 17.02 16.54 16.06 15.58 15.10 14.63 14.15 13.68 13.21 12.28 11.35 10.88 10.42 9.96 9.59 9.59 9.59 8.60 8.17 7.74 7.33 6.92 6.54 6.18 5.83 5.48 5.11 4.75 4.41 4.09 3.80 3.58 3.57 3.19 3.01 2.86
40 41 42 43 44 45 46 47 48	3635 3569 3482 3404 3326 3248 3170 3092 3014	75 76 77 78 78 78 78 78 78 78 78	23.08 22.56 22.04 21.54 21.03 20.52 20.02 19.51	89 90 91 92 93 94 95 96	62 46 34 24 16 9 4	16 12 10 8 7 5 3	2.66 2.41 2.09 1.75 1.37 1.05 0.75 0.50

VI. CARLISLE TABLE (Joshua Milne).

129

	1		1	11	1	1	1
Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
0	10000	1539	38.721	53	4211	68	18.972
I	8461	682	44.674	54	4143	70	18.275
2	7779	505	47.546	55 56	4073	73	17.580
3	7274	276 201	49.812	50	4000	76 82	16.892
4 5 6	6998	121	50.757 51.244	57 58	3924 3842	93	16.209 15.545
Š	6676	82	51.163	59	3749	106	14.918
7 8	6594	58	50.793	59 60	3643	I 22	14.337
	6536	43	50.240	61	3521	126	13.817
9	6460	33 29	49.569 48.820	62	3395 3268	127	13.311
11	6431	31	48.038	64	3143	125	12.299
12	6400	32	47.268	65	3018	124	11.787
13	6368	33	46.503	66	2894	123	11.271
14	6335	35	45.742	67	2771	123	10.749
15 16	6300	39 42	44.994 44.271	69	2648 2525	123 124	9 699
	6219	43	43.567	70	2401	124	9.147
17 18	6176	43	42.866	71	2277	134	8.646
19	6133	43	42.163	72	2143	146	8.156
20 2I	6090 -	43	41.458 40.749	73 74	1977 1841	156 166	7.715 7.327
22	6005	42 42	40.030	75 1	1675	160	7.003
23	5963	42	39.309	76	1515	156	6.690
2.4	5921	42	38.584	77 78	1359	146	6.401
25 26	5879 5836	43	37.856 37.131	78	1213	132	6.111 5.796
	5793	43 45	36.403	79 80	053	116	5.507
27 28	5748	50	35.684	81	837	112	5.201
29	5698	56	34.993	82	725	102	4.928
30	5642 5585	57	34.336 33.681	83 84	623 529	94 84	4.652 4.390
32	5528	57 56	33.031	85	445	78	4.125
33	5472	55	32.356	86	367	71	3.895
34	5417	55	31.679	87	296	64	3.709
35 36	5362 5307	55	30.999 30.315	88	232 181	51 39	3.395 3.467
37	5251	57	29.633	90	142	37	3.282
37 38	5194	57 58 61	28.953	91	105	30	3.262
39	5136	66	28.274	92	75	21	3.367
40 41	5075	69	27.608 26.965	93 94	54 40	14	3.481 3.525
42	4940	71	26.335	95	30	7	3.533
43	4869	71	25.712	96	23 18	5	3 · 457
44	4798	71	25.085	97 98		4	3.278
45 46	4727 4657	70 69	24.454 23.814	98	14	3 2	3.07I 2.773
47	4588	67	23.165	100		2	2.278
47 48	4521	63	22.500	IOI	7	2	1.786
49	4458	61	21.811	102	9 7 5 3	2	1.300
50 51	4397 4338	59 62	21.107	103	3	2	0.833
52	4336	65	19.676	.04	- 1	1	0.500

130
VII. EQUITABLE TABLE (GRIFFITH DAVIES).

10								
11 2833 11 48.02 55 1744 42 17.85 12 2822 12 47.20 56 1702 43 17.28 13 2810 12 46.40 57 1659 44 16.71 14 2798 13 45.60 58 1615 45 16.15 15 2785 14 44.81 59 1570 46 15.60 16 2771 15 44.04 60 1524 46 15.60 17 2756 16 43.27 61 1478 40 14.51 18 2740 17 42.52 62 1432 47 13.96 19 2723 18 41.78 63 1387 48 13.42 20 2705 18 40.33 65 1288 50 12.35 21 2687 18 40.33 65 1288 50 <th>Age.</th> <th>Living.</th> <th>Dying.</th> <th>Expectation.</th> <th>Age.</th> <th>Living.</th> <th>Dying.</th> <th>Expectation.</th>	Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
34 2400 26 31.32 78 588 54 6.20 35 2374 27 30.66 79 534 54 5.78 36 2347 27 30.01 80 480 54 5.38 37 2320 28 29.35 81 426 53 5.00 38 2202 28 28.70 82 373 52 4.63 39 2264 28 28.05 83 321 50 4.30 40 2236 28 26.74 84 271 47 4.00 41 2208 28 26.74 85 224 43 3.73 42 2180 28 26.07 86 181 38 3.50 43 2152 29 25.40 87 143 32 3.11 45 2003 30 24.10 89 85 20 2.91 <td>11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 31 33 34 35 36 37 38 39 41 42 43 44 45 46 47 48 48 49 49 49 49 49 49 49 49 49 49</td> <td>28.33 28.22 2810 2798 2771 2756 2740 2723 2705 2687 2687 2687 2687 2687 2687 2687 2687 2687 2687 2687 2687 2692 2631 2511 2570 2548 2525 2501 2477 2452 2426 2420 2374 2347 2292 2268 2180 2182 2208 2182 2033 2015 2033 2015 2017</td> <td>112 112 113 114 115 116 117 118 118 119 120 20 21 22 23 24 24 25 26 26 27 27 27 28 28 28 28 28 28 28 28 30 30 30 31 31 31 31 31 31 31 31 31 31 31 31 31</td> <td>48.02 47.20 46.40 45.60 44.04 43.27 42.52 41.78 41.06 40.33 39.60 38.16 37.44 36.73 36.02 35.33 34.65 33.98 33.30 34.65 33.98 33.30 32.64 31.98 31.30 32.64 31.92 32.70 28.05 27.40 26.74 26.74 26.77 25.40 24.75 24.10 23.44 22.78 22.12 21.47 20.83 20.20</td> <td>556 577 588 590 612 63 645 666 677 777 780 777 780 812 838 890 91 93 945</td> <td>1744 1702 1659 1615 1570 1524 1472 1385 1288 1238 1238 1187 1082 1082 1082 1082 1082 1082 1082 1082</td> <td>42 43 44 45 46 46 47 48 49 51 52 53 54 54 55 55 56 55 55 56 57 57 43 43 43 43 44 50 46 47 48 48 49 49 49 49 49 49 49 49 49 49 49 49 49</td> <td>17. 85 17. 28 16. 71 16. 15. 56 15. 66 14. 51 13. 96 13. 42 12. 88 12. 35 11. 83 11. 82 10. 32 10. 32 10</td>	11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 31 33 34 35 36 37 38 39 41 42 43 44 45 46 47 48 48 49 49 49 49 49 49 49 49 49 49	28.33 28.22 2810 2798 2771 2756 2740 2723 2705 2687 2687 2687 2687 2687 2687 2687 2687 2687 2687 2687 2687 2692 2631 2511 2570 2548 2525 2501 2477 2452 2426 2420 2374 2347 2292 2268 2180 2182 2208 2182 2033 2015 2033 2015 2017	112 112 113 114 115 116 117 118 118 119 120 20 21 22 23 24 24 25 26 26 27 27 27 28 28 28 28 28 28 28 28 30 30 30 31 31 31 31 31 31 31 31 31 31 31 31 31	48.02 47.20 46.40 45.60 44.04 43.27 42.52 41.78 41.06 40.33 39.60 38.16 37.44 36.73 36.02 35.33 34.65 33.98 33.30 34.65 33.98 33.30 32.64 31.98 31.30 32.64 31.92 32.70 28.05 27.40 26.74 26.74 26.77 25.40 24.75 24.10 23.44 22.78 22.12 21.47 20.83 20.20	556 577 588 590 612 63 645 666 677 777 780 777 780 812 838 890 91 93 945	1744 1702 1659 1615 1570 1524 1472 1385 1288 1238 1238 1187 1082 1082 1082 1082 1082 1082 1082 1082	42 43 44 45 46 46 47 48 49 51 52 53 54 54 55 55 56 55 55 56 57 57 43 43 43 43 44 50 46 47 48 48 49 49 49 49 49 49 49 49 49 49 49 49 49	17. 85 17. 28 16. 71 16. 15. 56 15. 66 14. 51 13. 96 13. 42 12. 88 12. 35 11. 83 11. 82 10. 32 10. 32 10
53 1826 41 19.00 97 1 1 0.50	53	1826	41	19.00	97	Í	I	0.50

131

VIII COMBINED EXPERIENCE TABLE (JENKIN JONES).

IX. BELGIAN TABLE (ADOLPHE QUETELET).

132

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation.
			·				
0	1000	149	38.18	50	409	8	19.59
I 2	851 795	56 31	43.78 45.82	51 52	401 393	8	18.97 18.35
	764	19	46.64	53	385	8	17.70
4	745	15	46.85	54	377	8	17.06
5	730 720	-10	46.77 46.44	55	369 361	8	16.42 15.77
3 4 5 6 7 8	711	9 8 6	46.02	57	353	8	15.12
8	703	6	45.51	57 58	345	8	14.45
9	697 691	6	44.93	59 60	337	9	13.80
11	686	5 4	44.28 43.60	61	328 318	10 11	13.16 12.56
12	682	3	42.95	62	307	12	11.97
13	679	3	42.04	63	295	12	11.43
14	676 673	3	41.22	64	283	13 13 -	10.92
15	670	3 4	40.40 39.53	66	270 257	14	10.43 9.93
17 18	666	4 5 8 8	38.81	67	243	14	9.47
	661	8	38.10	68	229	14	9.04 8.60
19 20	653 645	8	37.57 37.06	69	215	15	8.60 7.91
21	637		36.51	71	185	15	7.83
22	628	9 8 8	36.01	72	170	16	7.57
23	620		35.49	73	154	15	7.18 6.8)
24	612	7	34.92 34.32	74 75	139 .124	15	6.65
25 26	598	7	33.72	76	111	12	6.42
27	591	7 7 7 7 6	33.11	77	99 88	11	6.14
28	584 578		32.50	78	78	IO IO	5.86
29 30	571	7 7 8	31.85 31.24	79 80	68		5 · 54 · 5 · 20 ·
31	554	8	30.62	81	59	9	5.01
32	556	8	29.87	82	- 51	8	4.72
33 34	548 540	8 8 8	29.49 28.91	8 ₃ 8 ₄	43 36	7 6	4.51
35	532	8	28.34	85 86	30	5	3.97
35 35	524	8	27.74		25	5	3.74
37 38	516	8 .	27.19 26.60	87	20 16	4	3.45
39	500		26.03	89	12	4 3	3.29
40	491	9	25.47	90	9	3 3	3.11
41	483	8	24.91	91		I	3.12
42	475 467	8 8	24.27	92	5 4	I	2.89 2.52
44	459	8	23.13	94	3	I	2.12
45	451	8 .	22.53	95 96	2	0	1.90
	443	9	21.93		2 I	I	1.71
47	434	9 8	21.37	97 98	I	0 1	0.08
49	417	8	20.20	99	0	- 1	

133

X. ENGLISH TABLE No. 1 (WILLIAM FARR).

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation
0	10000	1463	41.17	51	4586	75 76	19.83
I 2	8536 8010	526 271	47.17 49.17	52	4511	76	19.17
3	7739	185	49.92	54	4358	78	17.83
4	7553	133	55.68	55 55	4279	84	17.17
5	7420	104	50.00	55	4194	90	16.50
0	7315 7232	83 67	49.75 49.25	57 58	4103	96 101	15.83
4 5 6 7 8	7:61	56	48.75	50	3905	106	15.17 14.58
9	7103	46	48.08	59 60	3799	112	14.00
	7561	39	47.42	61	3587	117	13.42
11	7022		45.75	62	3569	123	12.83
12	6985 69 5 5	35 41	46.00 45.17	63	3446 3318	128	12.25
14	6303	46	44.42	65	3185	138	11.17
15	(852	49	43.65	65	3045	142	10.67
	6313	50	43.00	67	2904	147	10.17
17 18	6762 6710	51 52	42.34 41.67	68 69	2759 2505	150	9.67
19	6658	52	41.00	70	2453	153 156	9.25 8.75
20	6505	53	40.34	71	2297	157	8.34
2.1	6552	54	39.67	72	2139	1 58	7.92
22	6497	55 55	33.00	73	1981	158	7.50
23	6442 6385	55	38.34 37.67	7.1	1823 -	156 154	7.08 6.75
25 .	6320		37.00	75 75	1512	151	6.42
25 26	6271	57 58	35.34	77 78	1360	145	6.00
27	6213	59	35.67	78	1214	140	5.67
28	6154	60 60	35.00	79 80	1073	134 126	5.34
29 30	6033	61	34.34 33.67	81	939 813	117	4.75
31	5971	62	33.00	82	695	108	4.50
32	5900	63	32.34	83	583	93 87	4.25
33	5845	63	31.67	84	490	87	4.00
34	5782 5717	64 65	31.08	85 85	402 324	77 67	3.75 3.50
35 35	5551	65	22.75	87	257	57	3.34
37 38	5585	66	27.08	88	200	47 38	3.c8
	5518	67 68	28.42	89	152	38	2.92
39 40	5451 5382	69	27.75 27.17	90	114 82	32 24	2.75
41	5313	69	26.50	92	53	18	2.42
42	5243	70	25.83	93	40	13	2.34
43	5173	71	25.17	94	27	10	2.17
44	5102	71	24.50	95 95	17	6	2.08
45 46	5030 4957	72 73	23.83 23.17	93	6	5 2	1.20
47	4884	73	22.50	97 98	4	2	1.00
47 43	4811	7+	21.83	97	2	1	0.75
49	4736	74	21.17	IOI	I	I	0.00
50	4562	75	20.58	101	0		

XI. ENGLISH TABLE No. 2 (WILLIAM FARR).

134

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation
0	5126235	817331	40.35	55	2147180	47003	16.66
I	4308904		45.95	55 55	2100177	48530	16.02
2	4027411		49.20	57	2051647	51921	15.39
3	3382059	95786	50.03	57 53	1999726	55033	14.77
4	3786273	69451	50.28	59 60	1944643	57914	14.18
5	3716822	50073	50.21	60	1885/79	60599	13.60
6	3566749	36653	49.89	61	*326180	63119	13.03
4 5 6 7 8	3630096	31331 25047	49.39 48.81	32 63	1753061	65497	12.48
9	3572718	22976	48.16	64	1529820	6774.1 63851	11.94
10	3549742	19260	47.47	65	1559959	71841	10.90
11	3530482	15926	46.73	63	1433118	73663	10.41
12	3513556	15658	45.95	67	1414455	75302	9.92
13	3496888	15495	45.17	63	1339153	757:3	9.45
14	3480392	19061	44.38	69	1252435	77871	9.co 8.55
15	3451331	17203	43.62	70	1184564	7870)	8.55
16	3444128	19532	42.84	71	1105855	79182	8.13
17 18	3424596	22674 25802	42.08 41.35	72	1025573	7923 + 78817	7.72
19	3376120	26361	40.67	7.4	947439 853522	7788	7.32 6.94
20	3349259	27125	39.99	75	790738	75400	6.57
2.1	3322134	27380	39.31	75 75	714338	74342	6.22
22	3294754	27629	39.31 38.63	77	639996	71701	5.89
2.3	3267125	27879	37.96	77 73	558292	63497	5.57
2.1	3239246	28128	37.23	79 85	499793	64759	5.26
25 25	3211118	28383	35.60	81	435034	60540	4.97
27	3182735	23647 28924	35.92 35.24	82	374494 318580	5591.4 50979	4.70
28	3125164	29215	34.57	33	257601	45839	4.44
29	3095949	29525	33.89	84	221762	4.161.4	3.96
30	3056424	29856	33.21	85 85	181148	35425	3.74
31	3036568	30208	32.53		145723	30387	3.53
32	3006360	30585	31.85	87	115336	25611	3.33
33	2975775	30990	. 31.17	83	89725	21185	3.14
34	2914785	31420 31886	30.50	89	68539 51355	17181	2.97 2.80
35 36	2331479	32379	29.15	91	37703	13032	2.65
37	2849100	32905	28.47	92	27092	8060	2.50
37 33	2816195	33464	27.80	93	19032	5977	2.36
39	2782731	34053	27.13	94	13055	4321	2.23
40	2748678	34673	26.46	95 95	8734	3013	2.11
41	2714000	35334	25.79	95	5591	2083	2.00
42	2678666 2642642	36024 36743	25.12	97 98	3608 2222	1385 894	1.89
43 44	2605899		23.79	99	1328		1.79
45	2568404	37495 38272	23.13	100	769	559 338	1.09
45 46	2530132	39077	22.48	IOI	431	198	
47 48	2491055	39908	21.82	102	233	III	
48	2451147	40759	21.17	103	122	61	
49	2410388	41629	20.52	104	61	31	
50 51	2368759	42514	19.87	105	30	16 8	
52	2282833	44315	18.58	103	6	3	
53	2238518	45219	17.94	103	3	2	
54	2.193299	45119	17.30	100	i i	ī	

XII. FARR'S ENGLISH TABLE No. 3.-Males.*

Age.	Living.	Dying.	Expectation.	Age.	Living.	Dying.	Expectation
0	511745	83719	39.91	55	209539	5144	16.45
I	128026	27521	46.65	56	204395	5281	15.86
3	386290	9213	48.83 49.61	57	193114	5428 5584	15.26 14.68
4	377077	6719	49.81	59	188102	5752	14.10
5	370358	5033	49.71	60	182350	5929	13.53
7	363325 361372	3953 3310	49.39 48.92	61	176421	6118 5314	12.96 12.41
7 8	358062	2734	48.37	63	163989	6515	11.87
9	355328	2297	47.74	64	157474	6720	11.34
10	351048	1983 1776	47.05 46.31	65	150754	6921 7115	10.82
12	349272	1666	45.54	67	136718	7297	9.83
13	347606	1637	44.76	68	129421	7458	8.36
14	345969	1679 1781	43.97	69	121963	7593	8.90
15 16	344290 342509	1928	43.18 42.40	71	114370	7695 7756	8.45 8.03
17	340581	2112	41.64	72	98919	7770	7.62
18	338469	2320	40.90	73	91149	7733	7.22
19	336149 333608	2541 2764	40.17 39.48	74	83416 75777	7639 7483	6.85 6.49
21	330844	2801	38.80	75 76	68294	7268	6.15
22	328043	2836	38.13	77 78	61026	6990	5.82
23	325207 322339	2868 2897	37.46 36.79	78	54036 47381	6655	5.51 5.21
25	319442	2926	36.12	80	41115	5832	4.93
25	316516	2954	35.44	81	35283	5361	4.66
27 28	313562	3009	34.77 34.10	82 83	29922	4862 4349	4.4I 4.17
29	307572	3038	33.43	84	20711	3834	3.95
30	304534	3068	32.76	85	16877	3328	3.73
3I 32	301466 208366	3100 3134	32.09	86 87	13549	2840	3.53
33	295232	3171	30.74	88	8325	1965	3·34 3.16
34	292061	3211	30.07	89	6360	1590	3.00
35 36	288850 285596	3254 3300	29.40 28.73	90	4770 3510	1260 979	2.84
37	282296	3352	28.06	92	2531	744	2.55
38	278944	3406	27.39	93	1787	553	2.41
39	275538	3465 3529	26.72 26.06	94 95	833	401 285	2.29 2.17
41	268544	3596	25.39	96	548	196	2.06
42	264948	3668	54.73	97 98	352	132	1.95
43	261280	3746 3826	24.07		220	86	1.85
44 45	257534 253708	3912	23.41	99	134 79	55	1.76 1.68
46	249796	4001	22.11	IOI	46	21	
47 48	245795	4095	21.46	102	25	11	
49	237508	4192	20.82	103	7	7 3	
50	233216	4395	19.54	105	4	2	
51	228821	4626	18.90	106	2 1	I	
52	254195	4758 4885	18.28	107	0	I 0	
54	214552	5013	17.06	100			

^{*} Dr. Farr's English Life, Males, No. 3, has recently been adopted by the Legislature of New York as the basis of annual valuations of life policies by the New York Insurance Department—interest assumed at 5 per cent.

TABLE OF HEIGHT AND WEIGHT.*

The following table shows what the best authorities regard as the most desirable Proportion of the Height of Individuals to their

	WEIGHT,
4 4 4 5 6 6 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Lbs.
4 4 4 7.7.7.9 9.00 100 100 100 100 100 100 100 100 100	
4 4 5 5 6 6 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
6. 5. 7. 7. 8. 8. 9. 9. 100	3
5. 6. 7. 7. 8. 9. 9. 10.	922
6. 7. 7. 8. 9. 9. 10.	2
7, 8. 8. 9. 9.	6143
8. 9. 10.	3/1
9. Io.	8.
10,	331
	IO.
	п

^{*} Compiled by Minturn Post, M. D., and Isaac L. Kip, M. D., Medical Examiners to the Mutual Life Insurance Company of New York, from observations upon the proper proportions of height and weight among American lives. This differs slightly from the English standards. It is substantially the same as those adopted by most of the American companies. Of course it is not expected that this proportion be adhered to in taking risks. It is only considered as the most desirable proportion,

RULE FOR EXPECTATION. SHORT

It may be convenient to know the expectation of life when one cannot have access to the tables, Either of the following simple rules, though only an approximate estimate, will give a result sufficiently accurate for ordinary purposes:

From 14 to 25 inclusive deduct the age from 100; half the balance is the Expectation.

3	*	3	3
3	"	"	"
98	96	92	
"	"	3	3 _
3	3	3	33
30	40	50	09 "
" 9 e			51 "
3	3	3	*

Or deduct the age of the party, whatever it may be, from 80, and two-thirds of the difference is the Expectation,

DISCOUNT TABLE.*

Present Value of One Dollar, due at the end of any number of Years not exceeding 100.

End of Year.	4 per Cent.	5 per Cent.	6 per Cent.	End of Year.	4 per Cent.	5 per Cent.	6 per Cent.
1 2 3 4 5	.961538 .924556 .888996 .854804 .821927	.952381 .907029 .863838 .822702 .783526	.943396 .889995 .839619 .792094 .747258	51 52 53 54 55	.135301 .130097 .125093 .120282	.083051 .079096 .075330 .071743 .068326	.051215 .048316 .045582 .043001 .040567
6 7 8 9	.790315 .759918 .730690 .702587 .675564	.746215 .710681 .676839 .644609	.704961 .665057 .627412 .591898	56 57 58 59 60	.111207 .106930 .102817 .098863 .095060	.065073 .061974 .059023 .056212	.038271 .036105 .034061 .032133 .030314
11 12 13 14	.649581 .624597 .600574 .577475	.584679 .556837 .530321 .505068 .481017	.526788 .496969 .468839 .442301 .417265	61 62 63 64 65	.091404 .087889 .084508 .081258	.050986 .048558 .046246 .044044 .041946	.028598 .026980 .025453 .024012 .022653
16 17 18 19	.533908 .513373 .493628 .474642 .456387	.458112 .436297 .415521 .395734 .376889	.393646 .371364 .350344 .330513 .311805	66 67 68 69 70	.075128 .072238 .069460 .066788 .064219	.039949 .038047 .036235 .034509 .032866	.021370 .020161 .019020 .018943 .016927
21 22 23 24 25	.438834 .421955 .405726 .390121 .375117	.358942 .341850 .325571 .310068 .295303	.294155 .277505 .261797 .246979 .232999	71 72 73 74 75	.061749 .059374 .057091 .054895	.031301 .029811 .028391 .027039 .025752	.015969 .015065 .014213 .013408 .012649
26 27 28 29 30	.365689 .346817 .333477 .320651 .308319	.281241 .267848 .255094 .242946 .231377	.219810 .207368 .195630 .184557 .174110	76 77 78 79 80	.050754 .048801 .046924 .045120	.024525 .023353 .022245 .021186 .020177	.011933 .011258 .010620 .010019
31 32 33 34 35	.296460 .285058 .274094 .263552 .253415	.220359 .209866 .199873 .190355	.164255 .154957 .146186 .137912 .130105	81 82 83 84 85	.041716 .040111 .038569 .037085	.019216 .018301 .017430 .016600 .015809	.008917 .008412 .007936 .007487 .007063
36 37 38 39 40	.243669 .234297 .225285 .216621 .208289	.172657 .164436 .156605 .149148 .142046	.122741 .115793 .109239 .103056	85 87 88 89 90	.034287 .032969 .031701 .030481 .029309	.015056 .014339 .013657 .013006 .012387	.006663
41 42 43 44 45	.200278 .192575 .185163 .178046 .171198	.135282 .128840 .122704 .116861 .111297	.091719 .086527 .081630 .077009 .072650	91 92 93 94 95	.028182 .027098 .026056 .025053 .024090	.011797 .011235 .010700 .010191 .009705	.004979 .004697 .004432 .004181
46 47 48 49 50	.164614 .158283 .152195 .146341 .140713	.105997 .100949 .096142 .091564 .087204	.068538 .064658 .060998 .057546 .054288	96 97 98 99 100	.023163 .022272 .021416 .020592 .019800	.009243 .008803 .008384 .007985 .007604	.003721 .003510 .003312 .003124 .002947

^{*} This Table shows the present value of future payments of One Dollar for any number of years to 100, and will prove useful both to the student of the science and to the solicitor.

COMPARATIVE MORTALITY TABLE—I.

Showing how many Persons will survive each Year out of the number starting in the Year of life indicated by the several Tables.

							-
Age.	Dr. Farr's English Life. Male No.3.	Actuaries.	Adjusted Experience of Mut. Life.*	Age.	Dr. Farr's English Life. Male No.3.	Actuaries.	Adjusted Experience of Mut. Life.*
					200 520	62.160	6= 000
0	511,745			55 56	209,539	63,469	65,208
I	428,026			57	204,395	62,094	64,122
2	386,290			58	199,114	59,161	61,806
3 4	377,077				188,102	57,600	60,559
4	370,358			59 60	182,350	55,973	EO 242
5	365,325			61	176,421	54,275	57,843
7	361,372			62	170,303	52,505	56,358
7 8	358,062			63	163,989	50,661	54,780
9	355,328		}	64	157,474	48,744	53,105
cr	353,031	100,000	100,000	65	150,754	46,754	51,331
ΙĮ	351,048	99,324	99,259	66	143,833	44,693	49,453
12	349,372	98,650	98,520	67	136,718	42,565	47,475
13	347,606	97,978	97,782	68	129,421	40,374	45,393
14	345,969	97,307	97,045	70	121,963	38,128 35,837	43,200
15	344,290	95,965	95,574	71	106,675	33,510	38,469
17	340,581	95,293	. 94,840	72	98,919	31,159	35,930
18	338,469	94,620	94,107	73	91,149	28,797	33,307
19	336,149	93,945	93,375	74	83,416	26,439	30,577
20	333,608	93,268	92,644	75	75,777	24,100	
21	330,844	92,588	91,912	76	68,294	21,797	
22	328,043	91,905	91,180	77 78	61,026	19,548	
23	325,207	91,219	90,447	78	54,036	17,369	17,669
24	322,339	90,529 89,835	89,714	79 80	47,381 41,115	15,277	17,009
25 26	316,516	89,137	88,245	81	35,283	11,424	
27	313,562	88,434	87,510	82	29,922	9,694	
28	310,581	87,726	86,774	83	25,060	8,112	
29	307,572	87,012	86,037	84	20,711	6,685	7,732
30	304,534	86,292	85,299	85 86	16,877	5,417	
31	301,466	85,565	84,561	86	13,549	4,306	
32	298,366	84,831	83,822	87 88	10,709	3,348	
33	295,232	84,089	83,083		8,325	2,537	0 7 7 6
34	292,061	83,339 82,581	82,343	89	6,360	1,864	2,156
35 36	285,596	81,814	80,863	91	3,510	892	
	282,296	81,038	80,123	92.	2,531	570	
37 38	278,944	80,253	79,385	93	1,787	3.39	
39	275,538	79,458	78,649	94	1,234	184	213
40	272,073	78,653	77,917	95	833	89	
41	268,544	77,838	77,191	96	548	37	
42	264,948	77,012	76,470	97 98	352	13	
43	261,280	76,173	75,753		220	4	
44	257,534 253,708	75,316 74,435	75,034	100	134	1 0	1 0
45 46	249,796	73,526	73,555	101	79 46	3	J
	245,795	72,582	72,771	102	25		
47 48	241,700	71,601	71,947	103	14		1
49	237,508	70,580	71,080	104	7		
50	233,216	69,517	70,172	105	.4		
51	228,821	68,409	69,231	106	2,	5	
52	224,195	67,253 66,046	68,265	107	I 0		
53 54	219,437	64,785	66,257	108	9		
74		041/03	00,20,7	1	1		

COMPARATIVE MORTALITY TABLE—II,*

Showing the number expected to die out of 1,000 persons entering each year, according to three English and one American Experience Tables; also, in the fifth column, the number actually dying, as proven by the Massachusetts Commissioners' observations among insured lives during seven years—1859 to 1865.

Age.	English Life.	Carlisle.	Actuaries,	Mutual Life. General Experience.	Massachusetts Experience. 7 years.
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 66 67 68 69 69 69 69 69 69 69 69 69 69 69 69 69	9.20 9.38 9.55 9.74 9.93 10.13 10.36 10.80 11.05 11.33 11.06 11.94 12.29 12.65 13.06 13.48 13.94 14.47 15.54 16.15 16.15 16.18 17.49 18.23 19.02 20.42 21.45 22.51 23.64 24.85 26.17 27.63 29.25 31.05 33.05 34.60 46.98 50.71 54.83 59.31 59.32	7.31 7.36 7.76 8.69 9.82 10.10 10.20 10.13 10.05 10.15 10.25 10.85 11.16 11.87 13.05 13.77 14.37 14.58 14.79 14.80 14.81 14.60 13.93 13.68 13.41 14.29 15.20 16.14 16.89 17.92 19.00 20.89 24.20 28.27 33.48 35.78 37.40 38.25 39.77 41.08 42.50 44.38 46.45 49.10 51.64	7.77 7.88 8.00 8.13 8.27 8.42 8.47 8.91 9.09 9.28 9.48 9.68 9.90 10.36 10.61 10.89 11.25 11.69 12.21 12.83 13.51 14.25 15.06 15.93 16.89 17.94 19.09 20.31 21.66 23.12 24.67 26.38 28.24 30.33 32.61 35.12 37.83 40.82 44.08 47.61 55.63 60.08 64.93 1000.00	8.26 8.33 8.41 8.49 8.57 8.66 8.74 8.82 8.91 8.99 9.07 9.15 9.21 9.27 9.31 9.32 9.34 9.38 9.49 9.72 10.10 10.66 11.33 12.05 12.77 13.41 13.95 14.51 15.13 15.83 16.66 17.64 18.81 20.17 21.75 23.61 25.68 28.00 30.57 33.40 36.59 40.00 43.86 48.31 53.33 59.35 1000.00	7.01 6.69 6.59 6.74 6.80 7.42 8.01 6.76 6.05 8.14 7.43 6.34 6.56 8.12 8.51 8.68 7.83 8.40 7.09 9.49 8.53 9.74 9.19 10.28 9.59 9.73 10.14 10.63 13.13 14.34 12.07 13.30 16.46 17.04 19.77 20.95 20.79 18.92 27.48 25.55 35.13 30.07 40.15 42.65 33.05

^{*} As it will be interesting and instructive still farther to show the results of observations upon AMERICAN lives, in comparison with other calculations made in England, we append two other Comparative Mortality Tables.

COMPARATIVE MORTALITY TABLE-III.

Showing the number of deaths in the year following each year of age from twenty-five to seventy inclusive, out of one thousand persons living at each of such ages, according to the experience of the three several Tables of mortality known as the Carlisle, the Actuaries' or Combined Experience, and the English Life, compared with Mutual Benefit Tables.

Deaths in next year Deaths in next year	1 41	7103.				
1000 26	Persons Livin	AGE.	Deaths in next y'r Mutual Benefit,	Deaths in next year Carlisle.	Deaths in next year Actuaries'.	Deaths in next year English Life.
1000 26	*****	25	4.24	7 21	2 22	2.00
1000 27		56			7.77	
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100 1 20.75 1 31.04 1 04.93 1 00.02			26.78			
	2,000	10	40.75	31.04	04.93	00.02

ORIGIN AND BUSINESS OF COMPANIES,

IN NEW POLICIES, (1st line) TOTAL INCOME, (2d line) AND TOTAL ASSETS, (3d line) COMPILED FROM ORIGINAL SOURCES EXPRESSLY FOR THIS WORK,

9	
98	
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FROM 1843 TO 1866.	
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			d d			
	1843.	1844.	1845.	1846.	1847.	1848.
Mutual of New York	476	919	1,047	1,085	1,466 + \$812,230 80 + \$550,298 56	\$333,912 04 \$758,473 14
New England Mutual		\$43 \$25,697 00 \$18,626 00	49,112 00 63,369 00	435 72,209 00 104,313 00	461 94,147 00 170,339 00	413 106,936 00 223,995 00
Mutual Benefit			693	264,661 31 198,724 51	308,923 71 444,314 82	1,406 345,810 51 673,362 96
New York Life			22,688 64	48,012 05	73,626 93	1,821 149,624 26 114,437 58
State Mutual			530 16,703 26 ‡ 66,703 26	30,653 67 97,356 93	538 49,220 50 146,577 43	39,244 16 176,853 59
Connecticut Mutual					892 58,416 00 92,612 00	187,142 00 184,959 00

	1849.	1850.	ISSI.	1852.	1853.	1854.
Union Mutual	Organized.	\$182,895 23	\$173,169 09	\$177,310 39	\$182,758 81	\$169,903 11
United States		31,651 00 117,980 00	539 51,417 00 142,551 00	1,161 90,457 00 178,063 00	575 100,802 00 206,211 00	422 103,424 00 238,684 00
Manhattan	v	Organized.	953 71,515 17 140,773 97	97,922 48 196,863 51	98,149 48 246,532 13	611 148,332 38 319,721 93
National, Vermont		384 14,216 41 8,645 62	281 20,080 61 16,177 17	184 24,813 12 28,087 75	31,999 75 44,741 54	180 32,558 28 62,027 84
Charter Oak		Organized		54,750 29	59,986 33	95,292.51
Æma		Organized.*				
Phoenix Mutual			Organized,	9,762 60	23,723 43	34,676 41
Berkshire			Organized.	4,312 31	192	28,441 39

*Incorporated 1820. † Total for the five years, 1843 to 1847 inclusive. ‡ This includes Guarantee Capital.

ORIGIN AND BUSINESS OF COMPANIES -- CONTINUED.

	The second secon	Service of the servic			And the Control of th	
	1819,	1850.	1851.	1852.	1853.	1854.
Massachusetts Mutual			Organized.	\$11,532 22 \$105,031 45	\$12,696 o6 \$108,397 20	\$17,326 37 \$116,704 79
Knick erbocker					393 †23,839 16 127,152 10	276 39,104 84 14,070 74
Mutual of New York	\$471,189 39	* \$530,906 38 \$1,280,088 46	\$544,601 16 \$1,592,655 56	1,060 688,123 46 2,018,775 61	1,260 776,227 61 2,444,684 81	780,798 71 2,734,485 31
New England Mutual	130,220 00 258,673 00	335 145,668 00 344,611 00	343 146,197 00 433,416 00	488 167,992 00 539,301 00	190,812 00 \$1649,380 00	453 220,780 00 629,827 00
Mutual Benefit	498,018 21 935,944 96	538,361 55 1,192,441 66	499 526,679 50 1,381,008 64	496 551,839 40 1,559,092 12	\$12 \$74,277 40 1,774,005 46	463 597,144 27 2,033,859 47
New York Life	1,069 129,821 36 164,368 88	1,755 275,809 47 320,581 27	321,782 72 354,755 24	356,242 47 456,751 00	639 384,558 40 636,678 92	485 367,357 65 814,044 95
State Mutual	315 60,572 17 194,426 91	189 51,275 51 212,863 92	60,573 17 186,148 29	361 59,828 00 197,503 88	69,064 96 228,982 91	50,272 44 250,631 31
Connecticut Mutual	4,243 422,225 00 469,803 00	5,589 693,905 00 918,406 00	742,816 00 1,351,036 00	1,320 741,172 00 1,701,673 00	935 737,178 00 1,980,170 00	939 769,068 00 2,154,489 00

The state of the s	1855.	1856.	1.857.	185S.	1859.	1860,
Mutual of New York	\$880,916 35 \$33,178,034 28	\$880,916 35 \$1,045,235 17 \$3,178,034 28 \$3,787,945 76	\$1,166,732 97 \$4,488,043 99	\$1,305,604 70 \$5,188,933 42	\$1,445,951 97 \$6,013,855 20	\$1,539,575 75 \$6,989,856 74
New England Mutual	516 249,104 00 768,984 00	299,390 00 964,418 00	330,568 00 1,144,856 00	826 417,844 00 \$1,395,622 00	1,007 467,508 00 1,342,856 00	1,388 580,805 00,706,700
Mutual Benefit	626,315 35 2,230,005 47	645,366 27 2,484,512 18	587 695,017 99 2,743,325 73	913 759,853 36 3,001,920 91	876,817 53 3,400,582 39	1,435 977,067 74 3,812,558 50
New York Life	378,186 14 902,062 70	706 408,223 27 1,509,co8 65	711 474,191 32 1,191,545 59	626 495,761 20 1,402,966 25	564,384 22 1,595,901 56	1,024 608,639 45 1,767,133 24
State Mutual	62,985 o5 280,760 33	63,786 70 320,867 40	69,877 56 393,573 59	69,009 21 437,580 67	75,381 61 477,619 29	198 84,008 21 529,735 63
Connecticut Mutual	766,963 00 2,271,837 00	587 776,418 00 2,473,037 00	\$65 802,804 00 2,706,765 00	930 853,665 00 3,000,523 00	1,254 946,822 00 3,370,001 00	1,077,138 co 3,889,411 oo
Union Mutual	376	139,517 57	151,756 33	363	526	505

Including surplus distributed in 1853, '58, '63, and '66.

ORIGIN AND BUSINESS OF COMPANIES—CONTINUED.

	A:	94.9		S F S S S S S S S S S S S S S S S S S S	1850	1860
	• 000	-000				
United States.	\$123,835 00 \$283,131 00	\$150,926 00 \$341,324 00	\$184,899 oc \$420,483 co	\$196,221 co \$497,250 co	\$ 207,006 co \$ 576,664 00	\$241,274 00 \$701,482 00
Manhattan	454 194,030 80 380,566 67	682 229,531 83 498,534 96	317,105 88 606,509 27	324,811 76 708,684 76	1,025 351,701 78 871,008 07	949 472,368 62 1,039,820 96
National, Vermont	32,867 29 75,156 58	326 43,237 30 100,032 14	299 50,393 14 122,915 27	54,532 92 155,594 20	61,772 90 195,758 57	281 77,395 18 228,164 76
Charter Oak	127,277 00	136,197 95	139,866 24	205,810 92	260,157 21	277,166 12
Ætna						
Phenix Mutual	631 44,160 28	50,373 96	829 58,815 48	450 59,332 Co	516	ors 57,959 21
Berkshire	265 33,740 91	334 43,083 77	50,456 15	148	212 54,373 67	65,756 30
Massachusetts Mutual	29,683 01 126,233 85	43,802 91 150,475 05	388 56,446 43 184,202 10	384 71,570 55 220,569 31	822 114,828 87 271,298 12	890 152,280 97 343,313 42

* Five months, † Eight months.

ORIGIN AND BUSINESS OF COMPANIES—CONTINUED.

			The state of the s	The second secon		
	1861.	1862.	1863.	1864.	1865.	1866.
Mutual of New York	\$1,593,732 14 \$7,839,768 12	\$1,755,285 51 \$8,918,167 95	\$2,091,301 62 \$10,029,264 81	\$1,755,285 51 \$2,091,301 62 \$2,849,866 50 \$3,853,065 80 \$6,217,035 88 \$8,918,107 95 \$10,029,204 81 \$11,790,414 68 \$14,112,249, 85 \$17,639,296 97	\$3,853,065 80 \$14,112,249 85	\$6,217,035 88 \$17,639,296 97
New England Mutual	1,000 634,707 00 2,043,904 00	1,364	814,222 00 * 2,798,239 00	1,102 316 00 2,651,116 00	1,318,271 00 3,362,986 80	* 1,873,406,00 * 4,508,876 00
Mutual Benefit	894 950,638 20 4,109,353 45	1,104,955 59	3,511 1,528,791 44 5,285,736 00	7,092 2,486,706 56 6,774,867 60	6,819 3,502,839 00 9,049,539 60	7,193 4,034,355 39 11,627,984 73
New York Life	1,201 612,549 80 2,004,857 53	3,302 894,280 99 2,586,246 07	4,675 1,162,191 19 2,705,666 74	4,905 1,729,811 17 3,741,078 48	2,342,065 40 5,018,449 06	7,296 3,088,804 47 7,009,092 25
State Mutual	87,928 82 571,038 20	91,602 64 593,797 17	105,668 64 639,525 08	304 130,035 13 711,472 29	304 129,436 58 669,399 08	
Connecticut Mutual	1,117,500 00 4,358,009 00	1,345,477 00 5,008,849 00	5,672 1,809,713 00 6,030,544 00	8,811 2,938,562 00 7,918,896 00	н.	4,174,245 00 †5,339,535 00 10,104,209 00 ‡13,316,275 00
Union Mutual	436 179,827 46	334	1,030 246,319 18 852,088 41	1,834 398,720 61 1,094,609 43	394,042 81 1,530,877 17	3,228 1,077,833 00 2,188,429 20
United States	710 237,754 00 804,852 00	665 00 257,079 00 876,067	314,470 00 1,052,011 00	1,315 424,682 oc 1,304,828 oc	540,578 co 1,600,139 oo	1,958 713,060 co 2,005,702 co

	Manhattan	812 493,549 03 1,174,800 40	1,146 539,567 36 7,350,467 28	1,664 752,401 38 1,548,849 22	2,140 973,534 02 1,991,225 23	2,555	3,717 1,710,635 co 3,525,877 co
	National, Vermont	68,361 13 254,706 88	79,943 49 292,549 07	248 88,348 54 348,591 69	468 115,832 47 405,034 91	. 139,118 55 439,127 48	450 163,094 02 524,928 42
11*	Charter Oak	230,167 38	6	247,888 54 657,387 29	2,245. 447,591 33 948,215 81	4,946 \$71,978 80 1,482,701 84	834 1,742,844 00 2,580,049 00
	Æ1na	78,533 67 281,263 65	804 94,878 07 310,492 04	1,822 199,952 40 431,236 02	980,755 52 881,578 72	8,815 1,686,813 61 2,036,823 05	14,189 3,521,930 80 4,401,833 86
	Phænix Mutual	59,453 83	74,300 77	918 118,820 58 353,993 94	2,297 183,051 89 472,355 15	4,302 379,706 39 819,284 71	848 607
-	Berkshire	70,220 48	75,024 66 317,545 54	92,850 54	308 135,710 65 390,004 41	388 140,400 24 506,014 46	273,203 00 677,898 00
	Massachusetts Mutual	183,684 79 440,581 08	200,362 97 475,094 58	246,532 02 604,898 41	1,388 346,251 51 742,990 98	2,478 536,331 07 1,111,910 62	3,107 761,776 81 1,597,565 43
~	Knickerbocker	306 72,500 74 272,481 72	92,624 19 291,695 92	886 158,146,53 394,309 83	1,249 229,709 89 547,561 56	293,253 49 853,709 10	5,422 953,982 00 1,579,145 00

‡ December 31.

ORIGIN AND BUSINESS OF COMPANIES—CONTINUED.

	1861.	1862.	1863.	1864.	1865.	1866.
Equitable	\$103,429 00 \$210,636 00	\$181,378 00 \$332,298 00	\$308,060 00 \$584,714 00	\$579,079 00	\$971,505° 00 \$1,648,486° 00	\$2,069,070 co \$3,077,788 oo
Guardian	41,322 05 163,151 90	61,821 35 184,234 63	1,048 117,291 39 210,266 44	1,900 265,532 62 335,817 17	2,804 413,305 53 513,818 13	2,192 582,610 37 737,413 66
Washington	225 45,543 89 156,299 85	362 71,493 93 200,722 55	512 101,456 15 267,462 79	919 187,718 07 369,567 51	260,646 93 530,097 36	1,838 359,528 63 727,129 99
Home	88,200 00 199,478 00	137,236 00 277,305 00	2,182 259,609 00 418,329 00	393,708 00 527,910 00	2,069 493,021 00 890,029 00	2,867 746,434 04 1,231,678 50
Germania	39,571 98 202,471 69	58,326 43 260,885 43	2,382 137,134 72 335,342 13	3,071 250,374 08 500,411 49	4,623 442,521 70 800,230 39	5,007 743,746 29 1,240,299 65
Security		23,423 00 122,857 00	888,1 80,538 00 160,092 00	1,403 149,411 00 249,831 00	323,827 00 425,027 00	3,328 603,651 00 757,398 00
North America		Organized.	1,040 125,474 07 160,853 12	1,236 229,671 18 285,142 05	2,368 649,579 84 706,742 63	3,790 1,303,566 61 1,539,019 26

			18/1	cty	770	1498
John Hancock		Organized.	\$115,257 54	\$207,515 42	\$318,650 42	\$226,007 00
Globe Mutual				1,039 135,965 13 218,384 27	2,763 417,737 29 469,009 12	3,051 672,429 07 789,248 62
Widows and Orphans'				105 17,259 19 231,538 76	1,093 107,138 70 306,814 01	248,957 00 530,839 00
Continental (Conn.)				6,039 99	61,499 74	1,524 195,619 50 490,013 59
National (N. Y.)				77	96,710 78 182,309 32	706 158,801 63 206,707 47
Brooklyn				38,156 97 160,738 10	817 92,397 13 218,091 18	1,207 260,012 64 404,411 52
Universal					656 71,694 90 243,360 41	1,555 227,815 45 315,904 22
Connecticut General					* 5,681 43 † 112,447 56	662 65,524 83 543,424 86
Continental (N. Y.)						
* From October 1, 1865, to December 31, 1866. † Commenced business October 1, 1865. †† 3 months.	65, to December	31, 1866. † Co	mmenced busine	ss October 1, 18	55. 118 months	

ORIGIN AND BUSINESS OF COMPANIES—CONTINUED.

		THE PERSON NAMED IN				And the second s
	- ESS	1863.	1863.	1-981	1865.	1866.
Great Western						89,823 00 \$55,539 00
American Popular						50,829 00 149,676 00
Atlantic Mutual						905 78,634 ∞ 175,779 57
New York State						752 48,150 72 155,765 15
New Jersey Mutual					Organized.	* 857 * 8,577 92 166,142 95
Provident (Phila.)						† 528 82,531 70 205,528 31

* Total since organization. † Incorporated third month 22d, 1865. Commenced business seventh month, 1865.

NOTES

To the foregoing Records of the Business of Companies.

NOTE 1, --Where the word "organized," in the totals above, does not appear, the organization took place during the year under which the figures first occur. NOTE 2.-From the impossibility of getting statistics, no companies are embraced in the foregoing which are not doing business in These tables are a study, and, in many respects, are valuable and suggestive. As will be seen, they have cost not a little of labor and New York or Massachusetts. This is the only full tabular statement that has ever been compiled; and, like all the book, it is copyrighted. careful painstaking.

ILLUSTRATIVE CALCULATIONS.

THESE EXAMPLES ARE MERELY SUPPOSED CASES.

EXAMPLE I.

COMMON LIFE POLICY-ALL CASH.

ANNUAL PAYMENTS.

Showing calculations on ordinary Life Policy, all cash. Age, 36. Amount, \$10,000 Premium, \$279. Dividend, 40 per cent., applicable at end of three years, i.e., on fourth annual premium.

Parties age	-
Amount of Policy	\$10,000
Annual premium	\$279 00
Premium first, second, and third years	00
Fourth year's premium, less 40 per cent. dividend, (\$279×40=)	
\$111,60111	60
	\$111 60
Total cash for fourth year, and each year thereafter	\$167 40

EXAMPLE II.

COMMON LIFE POLICY-ALL CASH.

IN QUARTERLY, THRICE, AND SEMI-ANNUAL PAYMENTS.

Showing calculations on ordinary Life Policy, all cash, semi-annual, thrice-annual, and quarterly payments. Age 36. Amount \$10,000. Premium \$279.

SEMI-ANNUAL PAYMENTS.

. 170	0
Annual Premium.	
Add 2 per cent.* for interest on the deferred payment	5 5
Total	\$284 5
Half cash in advance	\$142 2
Half cash in six months	142 2
THRICE-ANNUAL PAYMENTS.	
Annual Premium	\$270 0
Add 2½ per cent. for interest on deferred payments	
* Total	
	A.
One-third cash in advance	,,,,
Second and third payments due in four and eight months, respectively	95 3
QUARTERLY PAYMENTS.	
Annual premium	\$279 0
Add 3 per cent for interest on deferred payments	8 3
Total	\$287 2
* *************************************	Ψ10/3
One-fourth cash in advance	71 8
Second, third, and fourth payments, due in three, six, and nine months,	
respectively	
respectively	0/1 0.

^{*} The percentage on the deferred payments varies in different companies. In this calculation it is assumed at two per cent, on semi-annual payments; two and a half on thrice-annual; and three per cent, on quarterly payments. On any other percentage the principle of reckoning is the same.

EXAMPLE III.

COMMON LIFE POLICY-NOTE OF LOAN.

FIRST YEAR.

Showing the calculations of an ordinary Life Policy. Age, 36. Amount of policy, \$10,000. Amount of premium, \$279. Rate of interest, 7 per cent., payable in advance. Dividend, 40 per cent., payable at end of three years, i. e., on the fourth annual premium. One-third loan, or note.

the fourth annual premium. One-third foan, of note.	
Party's age (nearest birthday)	
Annual premium, \$279.	
Cash for two-thirds	\$186 00
Cash for interest on loan (of \$93) one year	6 09
First payment being	\$192 09
In case of semi-annual payment of premium. Amount of annual premium	m, \$279.
Loan for one-third\$93 00	
Whole amount of cash part	
T 10 0	
Half of amount of cash part. Interest on loan (\$93) one year.	\$93 00
Interest on \$93 (one-half cash part deferred) for six months	3 05

Total cash payment	\$102 14
Total cash payment in six months (being second semi-annual payment),	\$93.
In case of tri-annual payment of premium. Amount of annual premium,	\$279.
Loan of one third	
Cash for one-third of cash part	\$62 00
Interest on loan (\$93) one year	6 09
Interest on \$62 for one year (one-third deferred four months,	
and one-third eight months, equal to one-third \$62 deferred	4 06
one year)	
Total cash payment	\$72 15

Second and third payments being, \$62.00.

EXAMPLE IV.

COMMON LIFE POLICY-NOTE OR LOAN,

SECOND, THIRD, AND FOURTH YEARS.

Showing payment for second, third, and fourth years on Example I. Also, application of dividend to fourth year's premium.

SECOND YEAR.

Annual premium, \$279.

Cash for two-thirds	•
Total cash	\$198 18

THIRD YEAR.

Cash for two-thirds	
Total cash	\$204 27

FOURTH YEAR.

Same as third year	\$204 27
Dividend of 40 per cent. applies \$111.60, which will cancel first year's loan (\$93.), and a balance in favor of party insured of	18 60
Total cash fourth year, and thereafter	\$185 6

EXAMPLE V.

COMMON ENDOWMENT POLICY-NOTE OR LOAN.

FIRST YEAR.

Showing calculations on Common Endowment Policy. Age, 35, payable at death or 50 years of age. Amount of policy, \$10,000. Premium, \$589.40. Loan or note, one-third, \$229.80. Rate of interest, 7 per cent., payable in advance. Dividend, 40 per cent., payable at end of three years, i. e., on the fourth annual premium:

Cash for two-thirds	\$459 60
Cash for interest on loan (\$229.80)	15 09
Total cash	\$474 69
IN CASE OF SEMI-ANNUAL PREMIUM.	

io	
\$229	80-
15	09
7	53
\$252	44
	7

Second semi-annual (due in six months), \$229.80.

IN CASE OF TRI-ANNUAL PAYMENT OF PREMIUM.

Amount of annual premium	\$689 40 229 80		
et et			
Cash for one-third of cash part (\$459.60)		\$153	20
Interest on loan, as before		15	09
Interest on deferred cash (calculated the same as in Example I,		10	03
Total cash payment		\$178	32

Second and third payments of \$153.20 each, due in four and eight months, respectively.

EXAMPLE VI.

COMMON ENDOWMENT POLICY—SECOND, THIRD, AND FOURTH YEARS.

Showing the payments on the second, third, and fourth years, on Example V.

Also, application of dividend to fourth year's premium.

SECOND YEAR.		
Annual premium, \$689.40.		
Cash for two-thirds	\$150.1	60
Interest on two loans (\$229.80 each)		
21101000 011 011 0111110 (\$229.00 01111)		_
Total cash	\$489	78
		_
THIRD YEAR.		
	*	,
Cash for two-thirds	- 107	
Interest on three loans (\$229.80 each)	45	27
Total cash	S504	87
	0 304	-
FOURTH YEAR.		
Same as third year	\$504	87
Dividend, say 40 per cent., applies \$275.76, which will cancel one year's	5	
loan, \$229.80, and a balance in favor of party insured of	\$45	96
		-
Total cash fourth year, and each year thereafter.	\$458	91
	-	-

EXAMPLE VII.

CALCULATIONS UPON THE CONTRIBUTION PLAN OF DIVIDENDS.

The following able and lucid exhibit of the CONTRIBUTION PLAN, which is now attracting special attention, is by Mr. W. E. Harvey of Chicago:

Life Insurance premiums are made up of three parts:—first, the net cost of insurance for the current year; second, the premium reserve, or amount necessary to have on hand invested, at the close of the year, to meet the future increase of risk; and third, the loading, or margin, added to the net premium, to defray the necessary expenses, and cover any extraordinary losses consequent upon epidemics, etc., and provide for any deficiency caused by receiving a lower rate of interest than that assumed.

Dividends are usually made upon either the "percentage plan," by which all of the profits of the Company are thrown into a common fund, and distributed by an equal percentage to the Policy-holders upon the premiums paid, or upon the "contribution plan," by which each Policy-holder receives his dividend in proportion to the amount his own money has earned or contributed to the surplus.

If, during the year, the expenses equal the loading, the interest received and mortality experienced be that assumed in the construction of the premium tables, there will be nothing to divide. But so far, in American experience, the rate of interest received has been much higher, and the rate of mortality and expenses lower than that assumed, thereby saving a profit or surplus to the Company, to show the equitable distribution of which to the Policy-holders, and how the dividends increase with the age of the Policy, or if allowed to accumulate, will soon form a fund the interest upon which will be sufficient to pay the annual premium, or if applied to the purchase of additional insurance, will materially increase the Policy, is the object of this article.

This profit or surplus is derived from three legitimate sources, viz.:

- 1st. Excess of loading, or that portion of the margin not required for expenses or adverse contingencies.
- 2d. Excess of interest, being the difference between the table rate and that actually received.
- 3d. Excess of vitality, or that portion of the assumed cost of insurance not required to pay losses, in consequence of the mortality proving less than anticipated.

There is another great source of profit in some Companies, arising from lapsed or forfeited Policies, which, in the following calculation, is not taken into account, as it is to be hoped those Companies which now take advantage of the misfortunes of such of their Policy-holders as are unable, through adverse circumstances, to continue the payment of their premiums, by appropriating the value of such Policies, will soon see the justice and necessity of abandoning that part of their practice, and give to their unfortunate patrons the full worth of their money, either in insurance, as

the Massachusetts companies are obliged by law to do, or in some other equitable manner.

The following computations are based upon a Life Policy for \$10,000, issued at the age of thirty years, gross or loaded premium \$204.40, net premium \$152.89, and premium reserves, according to the Actuaries' or combined-experience tables of mortality, at five per cent. interest, and dividends by the "contribution" formula, which is as follows:

To the premium reserve (if any) at the close of the preceding year, add the premium actually received, less the expenses, and the interest upon both items at the rate actually received; from this sum deduct the "assessment for losses" for the year (which is found by multiplying the amount at risk by the probability of dying during the year, according to the table, multiplied by the ratio of actual to probable deaths), and the reserve at the close of the current year; the balance will be the contribution to surplus.

Although the expense of a Policy during its first year is much more than in subsequent years (arising from larger commissions, medical examination, revenue stamps, etc.), the extra expense is more than compensated by the more favorable rate of mortality during such year, viz., .3979 of the average expected mortality, according to the tables. See table "Value of Selection," page lx, 11th Mass. Reports.

Assuming that the Company will receive 7 per cent, on investments, and that the expenses will be the average of Companies doing business in Massachusetts in 1865, viz., 15 per cent, of the gross premium, and charging all of the expenses to premium receipts, we have \$204.40 gross premium, from which we deduct 15 per cent., or \$30.66, for expenses, leaving net to the Company \$173.74.

The amount that the Company must have at the issuance of the Policy, to provide for the losses of the year and the premium reserve, in other words, the "net premium," \$152.89; the difference between these last two items is \$20.85 of "unexpended margin," which, increased at 7 per cent. interest, would amount at the end of the year to \$22.31, the surplus arising from the first source of profit.

The sum of \$152.89, will, at 5 per cent. interest, pay the losses of the current year, and provide for the "premium reserve" at the end of the year, or the amount the Company must have to meet the increase in future risks; but as the Company realizes 7 per cent. instead of 5, the difference—2 per cent. on this amount—will yield \$3.06, the surplus arising from the second source.

The amount at risk is not, as might be supposed, the amount of the Policy, but that amount less the reserve at the end of the year, or the amount of the Policy less the amount which the insured has contributed toward insuring himself, being the difference between the net premium and the cost of insurance for the year. In this case, \$10,000 less \$76.93 premium reserve, leaves \$9,923.07 as the "amount at risk" during the first year. This amount multiplied by the fraction representing the

"probability of dying" (which is found by dividing the number dying during the year by the number living at the commencement of the year), $\frac{727}{86299}$ =.0084249, gives \$83.60 as the estimated "cost of insurance." But we find that the "American rate," as given on pages lviii and lix, 11th Massachusetts Reports, is .73446 of the "Actuaries';" we have, therefore, as the "assessment for losses," \$83.60 x.73446=\$61.40, which, deducted from \$83.60, gives \$22.20 surplus arising from the third source.

Source.
Summing up, we have—
From unexpended margin\$22 31
excess of interest
" excess of vitality
Total surplus
Applying the formulæ, we have for the "contribution to surplus," or "dividend"
at the end of the first year—
Gross premium\$204 40
Expenses, 15 per cent
Leaving amount actually received by Company\$173 74 Interest at 7 per cent
Total. \$185 00
Assessment for losses:
Probability Amount Ratio of actu- of at al to probable of dying, risk, deaths.
.0084249 x \$9,923.07 x .73446 = \$61 40
Premium reserve, end of first year
Balance or contribution to surplus
At the end of the 20th year:
Reserve, end of 19th year\$2,097 08
Premium, \$204 40—expenses, \$30.66
Interest at 7 per cent. on both items
Total\$2,429 78
Assessment for losses:
Probability Amount Ratio of actu- of at al to probable dying, risk, deaths.
.or50611 x \$7,754.83 x .73446 = \$85 78
Reserve, end of 20th year2,245 67
2,331 45
Balance or contribution to surplus\$98 33

In the following table, column A exhibits the probability of dying, which is found by dividing the number dying during each year by the number living at the commencement of the same year. (See Table VIII, p. 131 of this work.)

Column B, amount at risk, is the amount of the Policy, less the premium reserve.

Column C, premium reserves, found by multiplying the difference between the net annual premiums at age of entry and age of valuation, by an immediate annuity of \$1, commencing at age of valuation.

Column D, assessments for actual losses, is found by multiplying the amount at risk by the probability of dying, and by the ratio of actual to probable deaths,

Column E shows the dividends each year on the Policy.

Should the insured decide to purchase additional insurance with his dividends, instead of using the amount in reduction of his next premium, the amount of his reversionary addition (column F) can be found by multiplying the dividend by the single premium of assurance on \$1 at the then age.

The same sources of profit apply to paid up insurance as to annual premiums and the surplus ascertained by the same formulas; we have, therefore, assumed that these additions will be subject to the same rate of interest and mortality, and have entered in column G the dividends upon these additions.

Column H shows the sum of the reversionary additions to the Policy, and the amount purchased by the dividends upon the additions. The total value of the Policy will be found by adding the original amount of the Policy.

Column I shows the accumulation of dividends, at 7 per cent. compound interest, if held as a reserve fund and not applied to the purchase of reversionary additions.

At the end of twenty-five years, the dividends on the Policy, \$120.33, and from additions, \$84.07, will amount to \$204.40, or equal to the gross annual premium.

If the dividends are permitted to accumulate (column I), the interest, \$224.21 (column K), at the end of twenty-two years will be more than sufficient to pay the annual premium. Or the sum of the dividend on the Policy (column E), \$86.71, and the interest (column K), \$131.76, will amount to \$218.47, or \$14.07 more than enough to keep up the annual premium at the end of seventeen years, and yield an increasing annuity to the assured, or much increase his Policy. We append on the next two pages the tables above referred to.

LIFE POLICY FOR \$10,000, ISSUED AT THE CONTRIBUTION PLAN. GROSS PREM-TABLE OF MORTALITY AT

Actual mortality (American experience), .73446 of Actuaries' rates. Actual Interest

Years.	Probability of Dying each Year.	Amount at Risk.	Premium Reserve.	Assessm'ts for Actual Losses.	Dividend on Policy.
	A	В	C	D	E
1	.0084249	\$9,923.07	\$76.93	\$61.40	\$47.57
2	.0085784	9,843.09	156.91	62.02	49.30
	.0087468	9,760.10	239.90	62.70	51.10
	.0089191	9,673.85	326.15	63.37	53.08
5	.0090955	9,584.21	415.79	64.02	55.06
0	.0092877	9,491.03	508.97 605.80	64.74	57.09
	.0094849	9,394.20	706.65	65.44 66,12	59.25 61.34
	.0090807	9,188.54	811.46	66.85	63.71
10	.0101311	9,079.44	920.56	67.56	66.04
	.0103619	8,965.81	1,034.19	68.23	68.48
12	.0106118	8,847.42	1,152.58	68.96	70.95
	.0108943	8,724.30	1,275.70	69.81	73.66
	.0112509	8,596.71	1,403.29	71.04	76.57
	.0116973	8,465.02	1,534.98	72.73	79.72
	.0122120	8,329.48 8,190.58	1,670.52	74.7I 77.23	83.10 86.71
	.0135137	8,048.35	1,951.65	79.89	90.44
	.0142595	7,902.92	2,097,08	82.77	94.33
	.0150611	7,754.33	2,245.67	85.78	98.33
21	.0159386	7,602.68	2,397.32	89.00	102.46
22	.0168982	7,448.15	2,551.85	92.44	106.74
	.0179473	7,290.87	2,709.13	96.10	111.17
	.0190927	7,131.04	2,868.96	100.00	115.71
	.0203133	6,968.62	3,031.38	103.97	120.33
	.0216643	6,803.92 6,637.08	3,197.08 3,362.92	108.26	125.14 130.06
	.0231202	6,468.03	3,531.97	117.24	135.02
29	0263856	6,297.04	3,702.96	122.03	140.12
	.0282465	6,124.31	3,875.69	127.05	145.33
31	.0303361	5,950.55	4,049.45	132.58	150.86
	.0326117	5,775.90	4,224.10	138.34	156.37
	.0351205	5,600.89	4,399.11	144.47	161.21
34	.0378398	5,425.71	4,574.29	150.79	167.88
1	- 1			9	

AGE OF 30 YEARS. CALCULATED UPON THE IUM, \$204.40. RESERVES BY ACTUARIES' 5 PER CENT. INTEREST.

received on Investments, 7 per cent. Dividends by "Contribution" Formula.

Reversionary Additions Pur- chased with Dividends.	Dividends from Additions.	Total Reversionary . Additions.	Accumulation of Dividends on Policy at 7 per cent.	Interest on Accumulation of Dividends.
F	G	Н	ī	K
\$191.15		\$191.15	\$47.57	\$3.33
193.40	\$1.27	389.52	100,20	φ3·33 7.0I
195.99	2,66	595.67	158.40	11.00
198.25	4.14	809.40	222.57	15.58
200.59	5.75	1,030.97	293.21	20.52
202.76	7.59	1,260.32	370.82	25.96
205.10	9.43	1,498.05	456.03	31.92
207.20	11.36	1,743 23	549.29	38.45
209.26	13.53	1,996.93	651.45	45.60
211.18	15.86	2,258.82	763.09	53.41
213.07	18.35	2,529.30	884.98 1,017.88	61.95
214.92 216.90	21.05 23.88	2,807.56	1,160.79	71.25 81.26
210.90	27.86	3,393.80	1,318.62	92.30
221.92	30.46	3,700.51	1,490.64	104.34
224.93	34.38	4,118,21	1,678.08	117.47
228.18	38.05	4,346.49	1,882.26	131.76
231.44	42.54	4,686 78	2,104.46	147.31
234.78	47.25	5,049 12	2,346.10	164.23
238.07	52.43	5,414.10	2,608.66	182.61
241.37	57.91	5,791.88	2,893.73	202.56
244.70	63.83	6,182.92	3,203.03	224.21
248.09	70.20	6,587.68	3,538.41	247.69
251.43	77.07	7,006.59	3,901.81	273.13
254.67 258.04	84.07	7,439 19 7,887.64	4,295.27	300.67 330.48
258.04	92.35 100.85	8,351.69	5,181,62	330.40 362.71
264.54	100.00	8,831.56	5,679.35	397.55
267.74	119.64	9,327.93	6,217.02	435.19
270.93	130.07	9,841.35	6,797.54	475.83
274.51	141.38	10,372.93	7,424.23	519.70
277.85	154.68	10,925.66	8,100.30	567.02
279.86	166.18	11,493.98	8,828.53	618.00
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